

LEATH & ROSS'S HOMŒOPATHIC PHARMACIES

9 VERE STREET, W.,

And 5 ST. PAUL'S CHURCHYARD, E.C., LONDON.

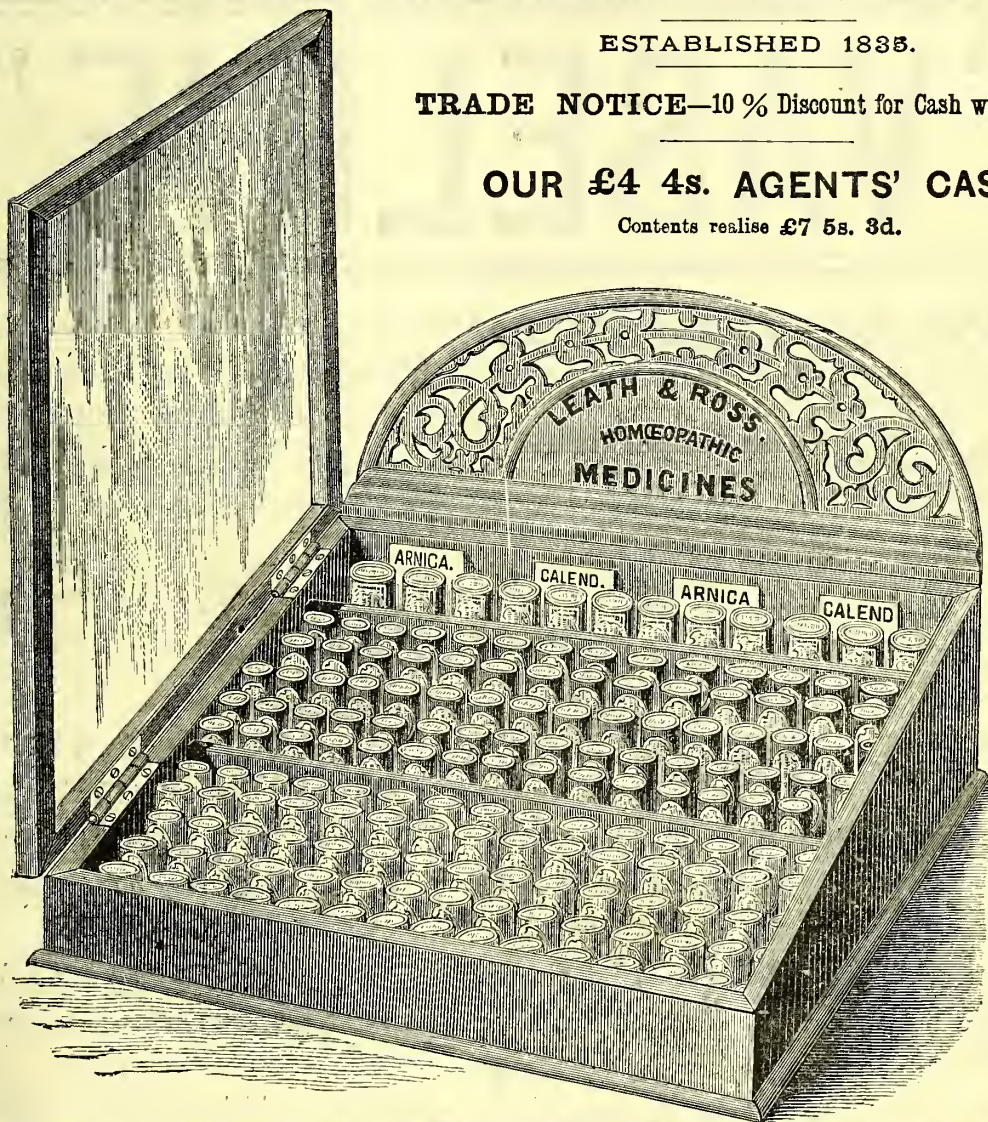
ESTABLISHED 1835.

TRADE NOTICE—10 % Discount for Cash with Orders.

OUR £4 4s. AGENTS' CASE,

Contents realise £7 5s. 3d.

Send for Book Catalogue and Illustrated Price List.



Upwards of 1,600 of these Cases have been sent out.
 DIMENSIONS.—Length, 19 inches; breadth, 16 inches; height of front, 3½ inches;
 height of back, including flap, 11 inches.

WHOLESALE PRICE LIST OF MEDICINES PUT UP READY FOR SALE.

	TO ACCOUNT.	FOR CASH.		TO ACCOUNT.	FOR CASH.
GLOBULES.—Sixpenny Tubes ...	3/0 doz.	2/9 doz.	PILULES.—Sixpenny Bottles ...	2/6 doz.	2/9 doz.
Ninepenny " ...	4/6 "	4/1 "	Ninepenny " ...	4/6 "	4/1 "
Shilling " ...	6/0 "	5/5 "	Shilling " ...	6/0 "	5/5 "
TINCTURES.—Sixpenny Bottles ...	3/0 "	2/9 "	TRITURATIONS.—Sixpenny Bottles	4/0 "	3/7 "
Ninepenny " ...	4/6 "	4/1 "	Ninepenny " ...	4/6 "	4/1 "
Shilling " ...	6/0 "	5/5 "	Shilling " ...	6/0 "	5/5 "

Liberal supply of printed matter to Agents, also Showcards, Transparencies, &c.

14 PRIZE MEDALS,

Including Highest Awards at New York, 1874; Philadelphia, 1876; Paris, 1878; International Medical (London), 1881; and the Healtheries (London), 1884. The only article which has received any official recognition anywhere.

PETROLEUM "VASELINE" JELLY.

"VASELINE" differs from the imitations offered as substitutes, in that it is made from a different base (American Crude Petroleum) and by a different process, and no acids are used in its manufacture. It is not a distillate, contains no paraffine, is not crystalline in its structure, and does not separate upon cooling, after being heated indefinitely. It is simply a concentrated Jelly of Petroleum, purified by repeated filtrations through bone black.

To compare "Vaseline" with a *distillate* of Petroleum is equivalent to testing the quality of butter by experimenting with cheese.

CAUTION.—The word **"VASELINE"** was originated by, and is registered all over the world as the Trade Mark of, this Company for their Emollient, Remedial, Toilet, and other preparations of Petroleum; and the Trade are cautioned against using the said word in connection with any goods not manufactured by us.

Reference is asked to notice of judgment obtained by this Company against infringers of their Trade Word, "Vaseline," published in THE CHEMIST AND DRUGGIST of December 15, 1884, and previously.

Also to the Circular in January issue (facing page 164), which gives the exact style of the genuine packages of the Medicinal, Toilet, and Household Preparations.

CHESEBROUGH MANUFACTURING CO. (NEW YORK)

41 HOLBORN VIADUCT, LONDON, E.C.

SOLE MANUFACTURERS AND PROPRIETORS OF THE "VASELINE" PREPARATIONS.

FLETCHERS' Concentrated Liquors.

Universally acknowledged by Pharmacists who have them in use to be the most Simple, Efficient, and Economical of all methods for preparing Syrups.

LIQUOR Ferri Iodidi.

EACH fluid drachm contains 34.4 grains of Iodide of Iron.

ONE volume added to seven volumes of *Syrupus*, *B.P.*, forms Syr. Ferri Iodidi of full Pharmacopœia strength.

Liquor Ferri et Quiniæ et Strychniæ Phosph.

EACH fluid drachm contains 4 grains of Phosphate of Iron, 4 grains of Phosphate of Quinia, and $\frac{1}{8}$ grain of Strychnia.

ONE volume added to three volumes of *Syrupus*, *B.P.*, forms Easton's Syrup.

LIQUOR Calcis Lactophosph.

EACH fluid drachm contains 8 grains of anhydrous Calcium Phosphate combined with Lactic Acid.

ONE volume added to seven volumes of *Syrupus*, *B.P.*, forms Syr. Calcis Lactophosph.

LIQUOR Ferri Phosph.

EACH fluid drachm contains 8 grains of Ferrous Phosphate.

ONE volume added to seven volumes of *Syrupus*, *B.P.*, forms Syr. Ferri Phosph.

LIQUOR Ferri Phosph. Comp.

EACH fluid drachm contains, in addition to the alkaline Phosphates, 4 grains of Phosphate of Iron, and 8 grains of Phosphate of Calcium, dissolved in pure Phosphoric Acid.

ONE volume added to three volumes of *Syrupus*, *B.P.*, forms "Chemical Food."

LIQUOR Ferri Hypophosph.

EACH fluid drachm contains 8 grains of Hypophosphite of Iron.

ONE volume added to seven volumes of *Syrupus*, *B.P.*, forms Syr. Ferri Hypophosph.

On receipt of a Post Card, trial samples will be sent, carriage paid, to any address.

Detailed List, containing prices and particulars of upwards of thirty different combinations, post free on application.

FLETCHER, FLETCHER & STEVENSON,
Holloway, London, N.

THE EDINBURGH COFFEE ESSENCES.

INVIGORATING, DELICIOUS, ECONOMICAL AND CONVENIENT.

SYMINGTON'S PURE COFFEE ESSENCE.



This Essence is guaranteed to contain all the soluble constituents of COFFEE (the only addition being Pure Sugar), the GRATEFUL AROMA of the freshly roasted Beans being retained by their Special Process of manufacture.

The New 1s. Bottle makes 30 Cups of Coffee, equal to that made—in the most approved manner—direct from the finest Beans.

SYMINGTON'S PURE COFFEE ESSENCE is an almost certain cure for Nervous Headaches, etc.

A Sample Bottle will be forwarded free by Post to any Chemist on receipt of Card.

SYMINGTON'S DANDELION COFFEE ESSENCE

Is Specially adapted for the Dyspeptic and Bilious who cannot take ordinary Coffee.

This Beverage combines the Medicinal virtues of Taraxacum with the refreshing properties of Coffee.

The Shilling Bottle makes 25 Cups of Coffee.

Extract from the LANCET.

"The Essence of Dandelion Coffee is really an excellent substitute for coffee, and will, we think, be an advantage to many bilious and dyspeptic patients."

Extract from the BRITISH MEDICAL JOURNAL.

"Symington & Co.'s Coffee Essences have a standard reputation, and possess great merit. The Coffee Essence must be prepared *in vacuo* at a low temperature, as the aroma of the Coffee is well preserved; in its essential qualities it does not differ in any way from a cup of Coffee made in the ordinary way."



Forty large Cups of delicious Coffee made without trouble, for One Shilling, by using



SYMINGTON'S ESSENCE OF COFFEE AND CHICORY

Prepared from the finest Coffee, with a suitable proportion of Chicory, which is generally preferred.

The great and increasing demand for this article warrants the assertion that it is the

COFFEE FOR THE MILLION.

THOS. SYMINGTON & CO., CHEMISTS, EDINBURGH.

SQUIRE'S PATENTED Malted & Cooked FARINACEOUS FOOD FOR INFANTS.

PRIZE MEDAL—INTERNATIONAL HEALTH EXHIBITION.

This will be found one of the most nutritious and easily digested Foods for Infants. It is prepared from the best wheaten flour, treated with malt in solution, whereby the food becomes very largely self-digestive. This process *includes* all the soluble and digestive properties of the malt, and *avoids* the introduction of the husk, which is directed by Professor Liebig to be strained out when foods are made with ground malt.

SQUIRE'S CHEMICAL FOOD.

It is a complex solution of Iron, Lime, Soda, and Potash, in a Phosphoric Syrup. The Iron is in the Ferrous condition. This Preparation, formerly known as PARRISH'S CHEMICAL FOOD, has been purchased by Messrs. SQUIRE. Each bottle of the genuine Preparation is secured by their seal, and the cases bear their Registered Trade Mark.

SQUIRE'S SUPER-DIASTASIC MALT EXTRACT.

EXTRACT BYNES (SQUIRE).

This Extract is prepared from the finest Malted Barley, at a very low temperature, *in vacuo*, by a special process, under the immediate supervision of one of the Firm. It possesses the highest digestive power of any Extract of Malt in the Market. A copy of the *comparative* examinations of the various kinds reported in the MEDICAL TIMES, June 21, 1884, pages 847 and 848, will be forwarded to any Physician on application. It contains only the soluble constituents of good Malt.

TWO PRIZE MEDALS—National Health Society's Exhibition, 1883; International Health Exhibition, 1884.

SQUIRE, Chemist on the Establishment in Ordinary to the Queen, 413 OXFORD STREET, LONDON.

NITRO-GLYCERINE TABLETS.

1-100th of a grain in each.

For ANGINA PECTORIS, NEURALGIA, HEADACHE, BRIGHT'S DISEASE, ASTHMA, etc.

The relief afforded by Nitro-Glycerine in Angina Pectoris is one of the most important discoveries of modern Therapeutics. A dose quickly checks the agonizing pain, and taken at intervals it wards off the attacks without producing any injurious effects on the Patient.

The Nitro-Glycerine is combined with Chocolate in a perfectly safe and stable form, and will keep in any climate. Price, 4s. 6d. and 2s. 6d. per Box.

Also for Hospitals and Dispensaries in 4-oz. and 2-oz. Bottles, 22s. and 12s. 6d. each respectively.

For export to very hot climates smaller bottles may likewise be had at 4s. 9d. and 2s. 9d. per bottle.

W. MARTINDALE,
PHARMACEUTICAL CHEMIST,
10 New Cavendish Street, LONDON, W.

ESTABLISHED 1810.

H. BROOKS, PEEL & CO., COLLAPSIBLE TUBE MANUFACTURERS

PATENTEES AND SOLE MANUFACTURERS OF THE

PORTABLE METAL SPRINKLER STOPPER,

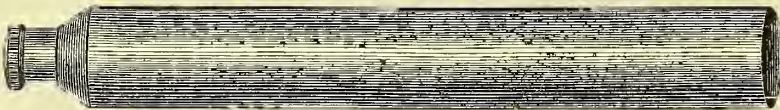
AND DEALERS IN

GLASS BOTTLES FOR PERFUMERS AND OTHERS.

STEAM FACTORIES:

31 Lime St., Camden Rd. (Offices), and Bartholomew Rd., Kentish Town, London, N.W.

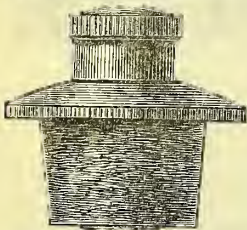
COLLAPSIBLE TUBES OF ALL SIZES.



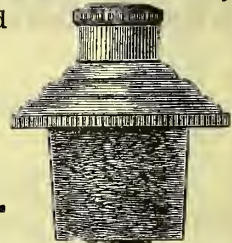
For Perfumes, Artists' Colours, Soaps, Cosmetiques, Creams, Oils, Varnishes, &c. These Tubes are inexpensive and portable, and may be applied to many useful purposes besides those above mentioned.

SOLE MANUFACTURERS AND PATENTEES OF

THE PORTABLE METAL SPRINKLER STOPPER,



With Cork fitted thereon for bottles of any size, and having apertures of various dimensions, especially adapted for Perfumes, Hair Washes, Lime and Glycerine Essences, &c. These handsome stoppers give a character and finish to the most ordinary bottles to which they may be applied. Gilt or plain; and put up if required in handsome glass lid boxes, suitable for shop counters and show cases, at moderate prices.



No. 18a.

THE "TORSION" PATENT SPRINKLER.

The two designs, Nos. 18a and 19a, are those to which we direct special attention, as sizes being in general use; other sizes will follow promptly to meet all requirements, on which Caps with two or more holes will be introduced to meet the public taste. Particular attention is called to the latest improvement in our Patent Metallic Stopper, the "Torsion."

This New Stopper adheres to the design of the original patent, which has been universally acknowledged as an ornamental and inexpensive article for the Toilette, as possessing all the advantages of a "Permanent and Indestructible Stopper, suitable for Bottles of all Sizes and Shapes," with the additional security it affords, that the Cap can never be entirely unscrewed, consequently it cannot be lost. It is specially effective as a Sprinkler, while giving a more prompt and copious, yet economic, supply, through the improved action of the Cap. Such combined advantages, in an article of exquisite finish, have long been desired, and it is thus submitted for general approval, and its usefulness when tried will be appreciated by all.

Illustrations, Price Lists, &c., can be had on application, or through any Wholesale House in town or country. All Orders received direct will be promptly attended to.



No. 19a.

CAUTION.—All Stoppers of our Manufacture are made of Pure Tin, and have the name of H. BROOKS & CO. stamped on the under side of the rim.

All Tubes are made of Pure Tin unless specially ordered of Mixed Metal, from the smallest size up to 13 in. by 23.

ENO'S FRUIT SALT

In Equity

AT THE ANTIPODES.

SYDNEY, NEW SOUTH WALES,
JULY 2, 1885.

In Equity.—(Before his Honour the PRIMARY JUDGE.)

ENO v. HOGG.

Another case of commercial piracy was disposed of by Sir William Manning on Tuesday last. Mr. S. P. Hogg, having been proved guilty of infringing the trade-mark of Mr. J. C. Eno, of Fruit Salt renown, was assessed in damages to the tune of £100. This is the third case of the kind that has been before the Court during the past few months. Eno was the plaintiff, and Davies & Co., of Goulburn, were the defendants. The charge was that the defendants had infringed the trade-mark of the plaintiff in respect of his preparation known as Fruit Salt. The evidence disclosed the fact that the plaintiff's bottles and labels had been closely imitated by the defendants, and the Judge declared this imitation was the result of a deliberate intention to defraud. The defence was a practical admission of fraud, and the fact that it was set up is itself a sufficient justification for the sentence of the Judge. The defendant pleaded that the term "Fruit Salt" was applied to several other manufactures besides the one for which he was responsible, and that his commodity was so dissimilar to that of the plaintiff that there could have

been no deception. Paraphrased, the former part of the plea says:—Other people do what I am accused of having done, therefore I ought not to be punished. Fortunately that kind of reasoning has no weight in the Supreme Court. The latter part of the plea was contradicted by the production of packages of the defendant's commodity. These did not exactly resemble the plaintiff's preparations, but there were many points of similarity between the two. As the Judge remarked, "the imitation was not so palpable as in some other cases, yet it had gone as far as the imitator dared." The suspicion is created that when the defendant included the words "Fruit Salt" in the name of the commodity which he manufactured for sale, his intention was to deceive. Frauds of the kind referred to are common, and the public of course suffer greatly thereby. The expressed determination of Sir William Manning to severely punish every person who may be proved guilty before him of having committed such offences will, however, have the effect of causing manufacturers whose trade-marks are being infringed to prosecute the pirates, and thus the evil, we may hope, will be made to cease.—*Sydney Morning Herald*, July 2.

SUCCESS IN LIFE—"A new invention is brought before the public and commands success. A score of abominable imitations are immediately introduced by the unscrupulous, who, in copying the original closely enough to deceive the public, and yet not so exactly as to infringe upon legal rights, exercise an ingenuity that, employed in an original channel, could not fail to secure reputation and profit."—ADAMS.

CAUTION—Legal Rights are protected in every Civilised Country.

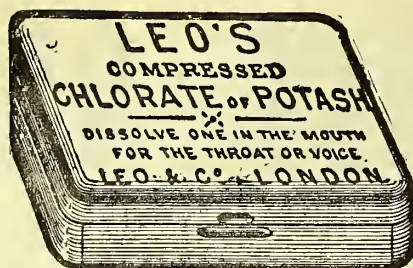
SOLD BY ALL CHEMISTS.

DIRECTIONS IN SIXTEEN LANGUAGES HOW TO PREVENT DISEASE.

PREPARED ONLY AT

ENO'S FRUIT SALT WORKS, HATCHAM, LONDON, S.E.

BY J. C. ENO'S PATENT.



LEO'S

COMPRESSED
Chlorate of Potash.

Price to the Trade, $\frac{2}{6}$ PER DOZEN, less the usual discount. Supplied by all Wholesale Druggists. A sample dozen boxes will be sent, postage paid, to any Chemist, on receipt of $\frac{2}{6}$ in stamps.

These are the best, and are put up in the most elegant style of any cheap compressed goods in the market.

SOLE WHOLESALE AGENTS:

BARCLAY & SONS, 95, Farringdon Street, London, E.C.

CORNS! CORNS! CORNS!

CURED WITHOUT PAIN BY

MUNDAY'S "VIRIDINE"

(REGISTERED TRADE MARK, "VIRIDINE," No. 36966.)

This Preparation, introduced by J. MUNDAY, now commands a large and increasing sale. Success is certain wherever introduced.

BOTTLES ONE SHILLING EACH.

NEW SHOW CARD WITH FACSIMILE OF PACKAGE SENT ON APPLICATION

NOTICE.—Each GENUINE Package has my Signature on the end.

PREPARED ONLY BY THE INVENTOR—

J. MUNDAY, CHEMIST, 1 HIGH ST., CARDIFF, SOUTH WALES.

AGENTS.—LONDON: WILCOX & CO., Chemists, 239 Oxford Street, W.; F. NEWBURY & SONS, SANIER, SUTTON, HOVENDEN, & CO. LIVERPOOL: SYMES & CO., 58 Bold Street. DUBLIN: HAYES & CO., 12 Grafton Street. BELFAST: GRAITAN & CO., Chemists. PARIS: PHARMACIE BERLÉ, 14 Rue de la Paix. AMSTERDAM: PERRY & CO., 97 Kalverstraat.

ROBINSON'S ORANGE WINE

(VIN. AURANTII, B.P.)

Specially prepared for Quinine Wine, does not deposit, will keep good in any Climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

THE UNIVERSAL CORN AND WART PENCIL.

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.

N.B.—The above is exempt from Stamp Duty by permission of the Board of Inland Revenue.

CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate. N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopoeia.



	Per lb.		Per lb.		Per lb.		Per lb.
Aqua Anethi, Concent.	4/0	Aqua Cinnam. Ver. Concent.	6/0	Aqua Feniculi, Concent.	4/0	Aqua Pimentae, Concent.	4/0
" Anisi, "	4/0	" Cassiae "	4/0	" Menth. Pip. "	4/0	" Rosae "	8/6
" Camphorae "	4/0	" Flor. Aurant. "	8/6	" Ang. Con. "	6/0	" Rosae Virgin. "	10/6
" Carui "	4/0	" Flor. Sambuci "	8/6	" Virid. "	4/0		

The above are put up in Bottles of $\frac{1}{2}$ lb. or 1 lb. and upwards, each of which has the Inventor's Protection Label over cork.

Wholesale Agents—Hearon & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & Co., Liverpool; Woolley, Manchester; Bewley & Draper, Hunt & Co., Dublin; Glasgow Apothecaries' Co., Hattrick & Co., J. Richardson & Co., Leicester; Slinger & Son, York; McKesson & Robbins, New York. Special terms for large quantities may be had from

B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

BARCLAY & SONS,

95 FARRINGDON STREET, LONDON.



NET CATALOGUE OF BRITISH & FOREIGN
GENUINE

PROPRIETARY MEDICINES

PERFUMERY, MINERAL WATERS, LOZENGES, AND
DRUGGISTS' SUNDRIES.

FORWARDED POST FREE ON APPLICATION TO ANY PART OF THE WORLD.

SOLE PROPRIETORS OF
ANTAKOS, DREDGE'S HEAL ALL,
DAVY'S DIAMOND CEMENT,
MRS. JOHNSON'S AMERICAN SOOTHING SYRUP,
LEEMING'S ESSENCE (Genuine), &c., &c.

Handbills with Name and Address supplied free.

SOLE AGENTS FOR

Ball's Bronchial Blessings
Burt's Liquor Vesicatorius
Dalby's Carminative (James')
Eucalyptera
James' Fever Powders (Kiddle)

Leo's Compressed Chlorate of Potash
Leo's Ext. Malt
Sweeting's Elixir
Whitehead's Ess. Mustard
Wilson's Diamond Cement

Zymolys

SPECIAL AGENTS FOR

Sir James Murray's Fluid
Magnesia
Beckett's Fruit Syrups

Himrod's Asthma Cure
Cuticura Remedies
Coate's Tooth and Hair Brushes

Ossidine

Conor's Gluten Bread, Flour, &c., for Diabetes. Price List on application.

VARNISHES of the Best Quality. For description and prices see Catalogue,
page 98.

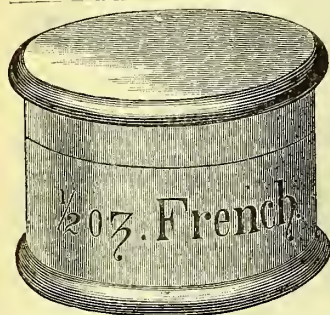
Export Orders carefully and promptly executed.

BARCLAY & SONS, 95 FARRINGDON STREET, LONDON,

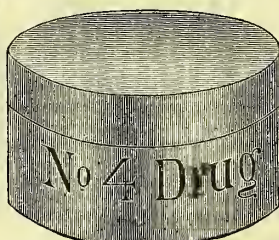
ESTES' AMERICAN DRUGGISTS' & CHEMISTS' TURNED WOODEN BOXES,

PILL, POWDER, & SALVE BOXES.
FINELY-FINISHED FACE AND TOOTH POWDER BOXES.

BOXES FOR SENDING VIALS THROUGH THE MAIL.



Boxes equal to English Manufacture, at much lower prices.
USE WOODEN BOXES IN PLACE OF PAPER OR TIN.

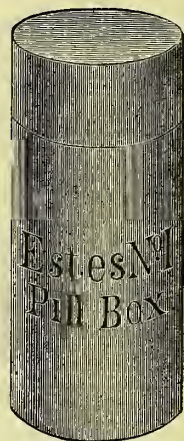


BOXES OF EVERY KIND AND
FINISH MADE TO ORDER.

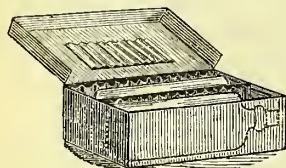
KILNER BROS.,
King's Cross, London, N.

AYRTON & SAUNDERS,
149 Duke Street, Liverpool.

SOUTHALL BROS. & BARCLAY,
Birmingham.



"The WANT of the PAST, the RAGE of the PRESENT, the BOX of the FUTURE."



BOX FOR 2 BOTTLES, OPEN.

THE UNIQUE FOLDING BOX (Patent),

For the SAFE TRANSIT of Bottles and Fragile Articles per post, &c.

Patentee and
Sole Manufacturer, **THOS. P. BETHELL, 24 Cable St., LIVERPOOL,**
And Stand 60, South Court, International Inventions Exhibition, London.

Also Specialities for Druggists and Druggists. Seidlitz Boxes, Baking and Condition Powder Cases and Packages.

THE PATENT SAFETY SAMPLE & PARCELS POST BOX COMPANY, LIMITED.

Works and Offices—BALDWIN'S GARDENS, GRAY'S INN ROAD, E.C.



BOX CLOSED READY FOR POSTING.

Stamped out of One Piece of Metal, thus avoiding Soldered Joints.
NO INCREASE OF COST.

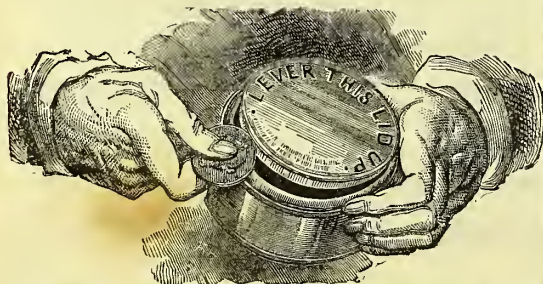
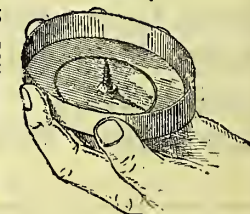
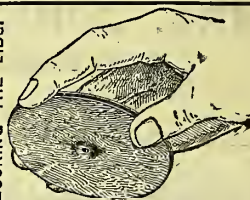
These Improved Tin Boxes are specially adapted for Pill, Lozenge Boxes, &c., and for the dispatch of Samples generally. They can be readily opened and securely fastened without the aid of any agent.

Can be had in all sizes.

Full particulars and samples post free on application.

Depot at Messrs. H. POTH & CO., Sugarloaf Court,
50 Leadenhall Street, E.C.

SHOWING METHOD OF SECURING THE LIDS.



Boxes ready made up, or the Patent Tops only (ready for making up), are supplied.

SELF-OPENING TIN BOX COMPANY

(GRIFFIN'S PATENT),

19 Kirby St., Hatton Garden, London, E.C.

THE NEW TIN BOXES for all kinds of Hermetically Sealed Preserved Foods, DRUGS and CHEMICALS.

THE NEW TIN BOXES are as cheap as the ordinary Boxes, require no soldering up, and can be opened with a penny piece.

THE NEW TIN BOXES are being adopted by the largest Food-preserving Houses and CHEMISTS, to whom references can be given.

THE NEW TIN BOXES are also perfect for Tea and Coffee Canisters, Biscuit Boxes, Confectionery, Paints, Oils, Varnishes, Soaps, &c.

THE NEW TIN BOXES are described by the Times, Standard, Chronicle, Illustrated News, Engineer, Grocer, Oil and Colourman, and Press generally, as the "neatest and most elegant invention ever made."

ROBINSON & SONS,

MANUFACTURERS OF CARDBOARD

CAMPBOR BALL BOXES,

FITTED WITH FALSE BOTTOM, AND FINGER-HOLE TO PUSH UP THE BALL.

1d. Star Pattern, labelled or plain.

2d. Star Pattern, shouldered lined with Tinfoil Paper.

$\frac{1}{2}$ oz. to 2 oz. Bronze or Purple, shouldered lined with Tinfoil Paper.

Ditto, covered with splendid Gelatine Paper, Gold Edges, Tinfoil Lined.

Glass Top Outers, to hold 1, 3, or 6 doz. each of above.

Or in any style, to suit Purchaser.

BAKING POWDER BOXES,

ROUND AND SQUARE,

1d., 2d., 3d. 4 oz., 8 oz., 16 oz. Loose Lids, Flap Lids to paste down, Cardboard Bodies, with Tin Ends, &c.

Manufacturers of

ROUND & SQUARE CARDBOARD BOXES

USED BY

Druggists, Drysalters, Homœopathists, and Confectioners.

ESTABLISHED 1839.

Honourable Mention for Cardboard Boxes, International Exhibition, 1862.

WHEATBRIDGE MILL & HOLMBROOK WORKS, CHESTERFIELD,

AND

55 Fann Street, Aldersgate Street, London.

CONDY'S FLUID—IMITATIONS.

In the High Court of Justice (CHANCERY DIVISION).

CONDY & MITCHELL, Limited, Plaintiffs,
67 Turnmill Street, London, E.C.

ROBERT SUMNER & CO., Defendants,

WHOLESALE DRUGGISTS, 40a Lord Street, Liverpool.

We, the undersigned Defendants in this case, having, in ignorance of the legal rights of the Plaintiffs, sold disinfecting fluid under the name of "**CONDY'S FLUID**," such compound **NOT** being of the Plaintiffs' manufacture, hereby express our regret, and have consented to a **PERPETUAL INJUNCTION WITH COSTS** in this action.

Dated 17th day of October, 1884.

(Signed)

R. SUMNER & CO.

(Witness) **J. W. THOMPSON, Solicitor, Liverpool.**

VIDE ALSO

CONDY & MITCHELL (Ltd.) v. FLINDERS,
CONDY & MITCHELL (Ltd.) v. COLDWELL,

In which Perpetual Injunctions with costs were granted.

My clients, Messrs. **CONDY & MITCHELL, Limited**, Sole Proprietors and Manufacturers of **Condy's Fluid**, **Condy's Ozonized Water**, &c., will take proceedings against any parties in any way infringing their well-known and duly registered Trade Marks or Labels.

J. SEYMOUR SALAMAN,

Solicitor, Trade Mark Protection Society,
3 King Street, E.C.

ROWLAND'S TOILET ARTICLES,**20 Hatton Garden, London,**

Have been known for the last 84 years all over the world, and being well advertised, and always finding a ready sale, are well worthy the attention of Chemists, Druggists, and Storekeepers. They will keep good for years, no matter how hot or cold the climate may be.

**ROWLAND'S
MACASSAR OIL**

Preserves, strengthens, and beautifies the hair: it contains no lead or mineral ingredients, and can now be also had in a golden colour, which is especially suited for fair or golden-haired children and persons. Four sizes.

**ROWLAND'S KALYDOR**

Is a most cooling, healing, and refreshing wash for the face, hands and arms, and is perfectly free from any mineral or metallic admixtures; it disperses freckles, tan, prickly-heat, redness, pimples, &c.

ROWLAND'S ODONTO,

Or PEARL DENTIFRICE, whitens the Teeth, prevents and arrests Decay, strengthens the gums, and gives a pleasing fragrance to the breath.

ROWLAND'S EUKONIA

Is a beautifully pure, delicate, and fragrant toilet powder, and has lately been much improved. Each box has inside the lid a certificate of purity from Dr. Redwood, Ph.D.; F.C.S., &c. Sold in three tints—white, rose, and cream.

ROWLAND'S ESSENCE OF TYRE

Produces immediately a perfect change in red or grey hair, whiskers and eyebrows, to a glossy and permanent brown or black, which colour neither washing nor perspiration will remove.

IMPORTANT CAUTION.—To protect the public from fraud, ALL ROWLAND'S ARTICLES have on the WRAPPER their SIGNATURE, "A. ROWLAND & SONS," in red ink.

COUNTER BILLS, SHOW CARDS, &c., CAN ALWAYS BE HAD ON APPLICATION.

IT WILL PAY YOU

to take this Agency, because you can sell ten times more CELANDINE than any other "CORN CURE," with half the trouble and expense.

See opinions of 200 Chemists who have proved it.

REGISTERED TRADE MARK No. 31,643.

**FOR LIBERAL
TERMS
AND AGENCY**



**APPLY TO THE
PROPRIETORS
DIRECT.**

Bottles Retail at 1/- each.

CELANDINE is by far the best and most saleable article in the market. It is well advertised, and in daily request. Attractively wrapped in colours. Gains recommendation of all buyers.

Great advantages offered to pushing Agents, whose interests are protected. A large and profitable trade can be done without risk, competition, or outlay. Sale or return if necessary.

Attractive Handbills, Pamphlets, &c., with Agent's name, Show Cards, Posters, &c.

HANDSOME NEW SHOW CARD IN COLOURS NOW READY.

INFRINGEMENTS will be prosecuted. We have obtained Injunctions, Costs, and Apology against the proprietors of spurious imitations called CELANITE and CELESTINE (see decision of Mr. Justice Kay, Chancery Division, High Court of Justice).

Sole Proprietors, CHAVE & JACKSON, Chemists, Hereford, England.

AGENTS WANTED IN EVERY TOWN IN THE WORLD. CORRESPONDENCE SOLICITED.

PETTITT'S DIARIES FOR 1886,

CONSISTING OF

SCRIBBLING DIARIES. Paper Boards. Eleven Editions. Prices 1/ to 6/6.

SCRIBBLING DIARIES INTERLEAVED. Cloth. Five Editions.
Prices 2/6 to 8/.

OFFICE DIARIES IN CLOTH. Eight Editions. Prices 2/ to 8/6.

POCKET DIARIES AND WALLETS. Seven Editions. In Various Bindings and
Sizes. Prices 6d. to 3/6.

COURT DIARIES, in old style Binding. Four Editions. Prices 1/6 to 4/6.

ENGAGEMENT BLOTting PADS. Folio and Quarto. Prices 2/6 and 1/6.

BLOCK INDICATORS AND REMEMBRANCERS. Six Editions.
Prices 1/ to 2/6.

THE ENGAGEMENT LIST. In Leather Case, 3/. Cards for ditto, 1/6.

HOUSEKEEPER'S HANDBOOKS. Four Editions. Prices 1/ to 4/.

**ALMANACKS, WASHING BOOKS, LEGAL & HANDY GUIDE BOOKS, IMPROVED
RENT BOOK, AN UNIVERSAL FORM OF WILL, &c., &c.**

BLACKWOOD'S DIARIES, 1886.

The following DIARIES are now ready. All information officially corrected. Maps in Nos. 1 to 7, and much useful information in all. For cheapness and accuracy they are unrivalled.

BLACKWOOD'S SHILLING SCRIBBLING DIARY.

Seven Days on each page, interleaved with Blotting Paper. 1/, fep. folio. Size, 13 by 8½. Perpetual cloth case for same, 1/6.

BLACKWOOD'S ONE-DAY, TWO-DAY, AND THREE-DAY DIARIES.

From 1/6 to 8/6; or interleaved, 2/ to 12/.

BLACKWOOD'S DESK DIARIES. 1/, 1/6, 2/, and 2/6.

BLACKWOOD'S QUARTO AND FOOLSCAP OCTAVO DIARIES. From 1/ to 5/

BLACKWOOD'S TABLET.

Seven Days on each sheet to be torn off or turned over at the end of each week when used. 1/.

BLACKWOOD'S POCKET BOOK & DIARIES for LADIES & GENTLEMEN.

With Frontispiece Vignette. Bound tuck, or elastic band, 1/ each.

BLACKWOOD'S POCKET BOOKS AND DIARIES.

Illustrated, in various sizes and prices, from 4d. to 2/6.

BLACKWOOD'S WALL BLOCK CALENDAR. 1/.

BLACKWOOD'S SOLICITOR'S CALL BOOK. 1/6. Size, 13 by 4 inches.

THE HOUSEKEEPER'S ACCOUNT BOOK.

Demy 4to., 1/; bound in cloth, 2/. Will suit any year.

BLACKWOOD'S PENNY POCKET BOOK AND DIARY.

MEDICAL CALL BOOK. 1/6.

OBLONG DIARY. 1/6.

GRIFFITH, FARRAN, OKEDEN & WELSH, LONDON,

And all Booksellers and Stationers in Town and Country.

LITERARY AND SCIENTIFIC.

WORKS FOR CHEMISTS AND STUDENTS.

PARRISH'S PHARMACY. Fifth Edition. Half Calf; price 30s."There is nothing to equal 'Parrish's Pharmacy' in this or any other language."—*Pharmaceutical Jour.***SIMON'S MANUAL OF CHEMISTRY.** Price 15s. With 16 Woodcuts and 56 Chemical Reactions, coloured. A Guide to Laboratory Work for Beginners in Chemistry and Students in Pharmacy. By W. SIMON, M.D., Ph.D.**REMSEN'S PRINCIPLES OF THEORETICAL CHEMISTRY.** New Edition, revised and brought up to date. Price 7s. 6d.**INCE'S LATIN GRAMMAR OF PHARMACY.** Third Edition, with Appendix. Price 4s.

For the use of Medical and Pharmaceutical Students; with an Essay on the Reading of Latin Prescriptions. By JOSEPH INCE, F.C.S., F.L.S., A.K.C. Lond., formerly Examiner and Member of Council of the Pharmaceutical Society of Great Britain.

GRIFFITH'S TEXT-BOOK OF MATERIA MEDICA AND PHARMACY. Price 9s."The ablest and the best work on the subject in the English language."—*Medical Press and Circular.***GRIFFITH'S NOTES ON THE PHARMACOPŒIAL PREPARATIONS.** 3s. 6d.**GRIFFITH'S POSOLOGICAL TABLES.** Fourth Edition. Price 1s.; or on linen, with rollers, 3s. 6d.**WILLSON'S CHEMICAL NOTES FOR PHARMACEUTICAL STUDENTS.** 2s. 6d.**DRAGENDORFF'S TEXT-BOOK OF PLANT ANALYSIS, QUALITATIVE AND**

QUANTITATIVE. for the Extraction of Drugs, Oils, Gums, Spirits, Dyes, &c. Translated by H. G. GREENISH, F.I.C. Price 7s. 6d.

THE MINERAL WATERS OF EUROPE. Price 3s. 6d.

Analytical Reports on all the Bottled Waters. By Professor TIGHBORNE, F.C.S., LL.D., and Dr. PROSSER JAMES, M.R.C.P. Lond.

Send for Catalogue, post free.

London: BAILLIÈRE, TINDALL & COX, 20 King William Street, Strand, and all Booksellers.

KIRKES' PHYSIOLOGY,

Eleventh Edition, revised, with 500 Illustrations.

Post 8vo., price 14s.

KIRKES' HANDBOOK OF PHYSIOLOGY. Thoroughly revised and edited by W. MORRANT BAKER, F.R.C.S., Lecturer on Physiology, and Surgeon to St. Bartholomew's Hospital; and VINCENT DORMER HARRIS, M.D. Lond., Demonstrator of Physiology at St. Bartholomew's Hospital.

JOHN MURRAY, Albemarle Street.

WORKS BY DR. DOBELL,

Consulting Physician (late Senior Physician) to the Royal Hospital for Diseases of the Chest, London, &c.

Now ready, 8vo, cloth, 10s. 6d.,

The Medical Aspects of Bournemouth and its SURROUNDINGS. With Chromolithographs and Photographs from Sketches by the Author, and numerous Cases.

Chap. I. Author's Experience of Health Resorts. II. Special Climate of Bournemouth Explained. III. Marine Cachexia, remarkably absent. Liver and Digestion in Chest Disease. IV. The Pine Woods, Aseptic and Antiseptic Atmospheres. Alpine Stations and Pine Woods. V. Who should and who should not be sent to Bournemouth and to Alpine Stations. VI. Disease - tracts and Effects of Climate. VII. Boscombe, Westbourne, Branksome, Parkstone, Southbourne, Christchurch. VIII. Geology: A vast mass of Sand and Gravel. IX. Notes on the Chief Health Resorts of the World. X. Bournemouth in Summer. Excellent Sands. Directions for Bathing. Summary of 18 years' Meteorological Reports.

On Loss of Weight, Blood-Spitting and Lung DISEASE. Second Edition. Coloured Plate.**Affections of the Heart and in its NeighbourHOOD.** Cases, Aphorisms, and Commentaries. Illustrated. Second Issue.**On Winter Cough, Catarrh, Bronchitis. EMPHYSEMA, ASTHMA.** Coloured Plates. Third Edition. With Notes on Climate.**On Diet and Regimen in Sickness and Health.** Seventh Edition. Enlarged.**On the Mont Dore Cure, and the proper way to use it.****Report on the Use of Pancreatic Emulsion and PANCREATINE,** as first introduced into Medical Practice by Dr. DOBELL in 1863.3d. In the Shilling Discount
for Cash with Order.

Books sent to any of the Wholesale Houses for enclosure.

HENRY KIMPTON, Chemical and Scientific Bookseller and Publisher, 82 High Holborn, London, W.C.

New Catalogue One Stamp. To the Pharmaceutical Society of Great Britain.

THE MIDDLESEX HOSPITAL MEDICAL SCHOOL.

THE WINTER SESSION will OPEN on **THURSDAY, 1 OCTOBER 1st,** at Three P.M., with an Introductory Address by Dr. J. K. FOWLER, M.A., after which the Prizes awarded during the previous Winter and Summer Sessions will be distributed.The **ANNUAL DINNER** of the past and present Students and their Friends will take place the same evening at the Holborn Restaurant.

The Hospital contains 310 Beds, and there are special departments for Cancer, Diseases of the Eye, Women, and Syphilis. In the new Out-patients' Department, in addition to Medical and Surgical cases, special days are devoted to Diseases of Children, the Throat and Ear, the Skin, and cases requiring Electrical Treatment.

HOSPITAL STAFF AND LECTURERS.

Consulting Physicians—Dr. Goodfellow Dr. Henry Thompson, Dr Greenhow, F.R.S.

Physicians—Dr. Cayley, Dr. Sydney Coupland, Dr. Douglas Powell, Dr. D. W. Finlay.

Assistant Physicians—Dr. J. K. Fowler, Dr. C. Y. Biss, Dr. J. J. Pringle

Obstetric Physician—Dr. Arthur W. Edis.

Physician to the Skin Department—Dr. Robert Liveing.

Assistant Obstetric Physician—Dr. W. A. Duncan.

Consulting Surgeons—Mr. Shaw, Mr. Nunn.

Surgeons—Mr. Hulke, F.R.S., Mr. George Lawson, Mr. Henry Morris.

Assistant Surgeons—Mr. Andrew Clark, Mr. A. Pearce Gould.

Ophthalmic Surgeon—Mr. William Lang.

Aural Surgeon—Mr. Arthur Hensman.

Consulting Dental Surgeons—Mr. Toms, F.R.S., and Mr. Turner.

Dental Surgeon—Mr. Storer Bennett.

Assistant Dental Surgeon—Mr. Claude Rogers.

Other Lecturers—Mr. B. T. Lowne, Dr. Thorowgood, Mr. Foster, Mr. Henry Case, Mr. J. B. Sutton.

Two Entrance Scholarships, value £25 and £20 per annum respectively, and an Entrance Science Scholarship value £50, will be competed for on September 29th and following days. Special arrangements are made for the convenience of Dental Students.

For further information, and for a Prospectus, apply to the Dean, or to the Resident Medical Officer at the Hospital.

ROYAL PUBLIC DISPENSARY,

21 WEST RICHMOND ST., EDINBURGH.

TUTORIAL CLASSES for the Minor and Major Examinations are conducted by Mr. J. RUTHERFORD HILL, PHARMACEUTICAL CHEMIST. Instruction is given in the whole of the subjects. Day and Evening Classes. Particulars from Mr. HILL on application.

"CONCILIO ET LABORE."

THE MANCHESTER COLLEGE

OF

CHEMISTRY & PHARMACY,

225 & 227A OXFORD STREET, MANCHESTER.

Director, Mr. W. SPENCER TURNER, Pharmaceutical Chemist, &c.

Assisted by Mr. GEORGE CLAYTON, Mr. WILLIAM PEARSON, and Mr. E. G. TAYLOR.

ESTABLISHED 1877. TRANSFERRED TO MANCHESTER, 1882.

REPORT.

During the past year the attendance at the Classes has been continually increasing, until, at the July Vacation, there were about 40 Students' names on the register. This has necessitated additional space and more teaching power, so, during the vacation, the upper part of the adjoining house has been opened into, and the rooms thoroughly cleaned and re-arranged, so that the School buildings now include

THREE CLASS ROOMS, capable of seating 30 Students comfortably among them, each fully provided with charts, diagrams, &c., so that the system of "small classes, with question, answer, and discussion," as distinct from lectures, may be carried on as it used to be with smaller numbers, Mr. Turner repeating that he would infinitely rather be known as a good and successful teacher than as the "proprietor of a big school." And he trusts that, should further help be required, he may be as fortunate in getting trustworthy assistants as he has hitherto been.

TWO LABORATORIES, with working space for 26 Students, and fully supplied with chemicals and apparatus. Each Student has his own bench, and is provided, free of extra charge, with everything he requires (of course paying cost price for breakages).

A DISPENSARY, equal in size to the larger laboratory, well lighted for both day and night work; the working spaces are so arranged that every student has ample means of practical work at the most important art of Dispensing Mixtures, Pills, Ointments, Plasters, Blisters, Suppositories,

&c. All work in Laboratories and Dispensary is under the superintendence of Mr. Turner or his deputies.

A MUSEUM, in which are collected the cabinets of Materia Medica, Herbarium, specimens of Pharmacopœial Preparations, Rare Chemicals, Microscope, and other pieces of Scientific Apparatus that had before been scattered in the different class rooms, thus making them more useful to students and teachers.

The School Work includes the following distinct and independent sets of classes. The fees named are inclusive.

MAJOR.

FULL TIME CLASS.—Four hours' practical, four hours' class daily. Fee, £2 2s. per month.

EVENING CLASS.—Two hours' practical, four hours' class weekly. Fee, 15s. per month.

MINOR.

FULL TIME CLASS.—Four hours' class, two hours' practical daily. Fee, £3 3s. per month (reduction for term).

AFTERNOON and EVENING CLASS.—Either doing four hours' class, two hours' practical weekly. Fee, £1 1s. per month (reduction for term).

PRELIMINARY.

Mr. TAYLOR conducts this Class, and arranges Time Table and Fees to suit attendance.

PASS LIST.

For the year between October, 1884, and July, 1885.

MINOR.

October, '84—
Mr. S. HASSALL, Windsor
" W. BERRY, Manchester
" J. B. WILLIAMS, Manchester
December, '84—
Mr. JAMES RAE, Alderley
January, '85—
Mr. J. CAGE, Hingham
" J. W. COOK, Chapel-en-le Frith
February, '85—
Mr. R. W. BAX, Rawtenstall
" G. MORECROFT, Heaton Norris
April, '85—
Mr. A. H. BURGESS, Alderley
" H. E. GOODWIN, Sale
" S. HEYWORTH, Bradford

April, '85—
Mr. J. P. HARRISON, Cheetham Hill
" U. A. JACKSON, Strangeways
" S. KIRTLAN, Blackburn
" W. A. SOMERVILLE, St. Anne's-on-Sea
" A. WILKINSON, Cheetham Hill
June, '85—
Mr. W. MANUEL, Newark
" E. JEANS, Salford
July, '85—
Mr. G. BALL, Stockport
" J. S. KAY, Rochdale
" JAMES LEES, Oldham
" P. H. JONES, Talsarnau
" S. P. LOWE, Huddersfield
" D. F. OXEN, Tynemouth
" F. PADLEY, St. Albans
" E. WELLS SMITH, Sheffield

PRELIMINARY.

October, '84—
Mr. O. E. CAVE, Bowden
" G. PENTY, Manchester
" J. C. WHITE, Grimsby
April, '85—
Mr. E. G. BEARD, Manchester
" A. ASHTON, Manchester
July, '85—
Mr. A. E. ENTWISTLE, Crumpsall
" S. B. GIBSON, Manchester
" J. HORNE, Pendleton
" W. GERARD, Manchester
" E. W. SLEATH, Manchester

Fuller particulars of the School are given in the (copyright) Circular, which will be sent free on application.

THE SCHOOL OF PHARMACY

OF THE

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

CHEMISTRY and PHARMACY ...	...	Emeritus Professor Redwood, Ph.D., F.I.C., F.C.S.
BOTANY and MATERIA MEDICA ...	...	Professor Bentley, M.R.C.S., F.L.S.
PRACTICAL CHEMISTRY... ..	...	Professor Attfield, Ph.D., F.R.S., F.I.C., F.C.S.
CHEMISTRY ... ..	...	Professor Wyndham Dunstan, F.C.S.

FORTY-FOURTH SESSION, 1885-6.

THE SESSION commences on OCTOBER 1, and extends to the end of JULY. Students can enter at any time, but they are strongly recommended to join the classes either on October 1, when the FIRST COURSE of Lectures begins, or on March 1, when the SECOND COURSE of Lectures commences.

THE DISTRIBUTION of the SCHOOL PRIZES will take place on Wednesday, October 7, at 8 p.m. An Address to the Students will be delivered by James Dewar, M.A., F.R.S., Jacksonian Professor in the University of Cambridge, and Fullerian Professor of Chemistry in the Royal Institution. All Students and friends, ladies as well as gentlemen, are invited to be present.

BOTANY AND MATERIA MEDICA.

Professor BENTLEY, M.R.C.S.Eng., F.L.S.

These Lectures are delivered on Thursday, Friday, and Saturday mornings, at Nine o'clock.

FEES.										
	Botany and Materia Medica, one Course (five months) ... ..	...	...	...	...	...	...	...	£2	2 0
	An entire Session (two Courses), including Classification of Plants and Practical Botany ... ..	...	...	...	...	...	...	...	3	3 0
	Classification of Plants and Practical Botany, separately ... ..	...	...	...	...	...	...	...	1	1 0
	Perpetual Admission to all the Courses ... ..	...	...	...	...	...	...	...	4	4 0

CHEMISTRY AND PHYSICS.

Professor WYNDHAM DUNSTAN, F.C.S.

These Lectures are delivered on Monday, Tuesday, and Wednesday mornings at 9 o'clock.

FEES.										
	One Course ... ..	...	...	...	...	...	...	...	£3	3 0
	An entire Session—Two Courses ... ..	...	...	...	...	...	...	...	4	4 0
	Perpetual admission ... ..	...	...	...	...	...	...	...	5	5 0

PRACTICAL CHEMISTRY.

Professor ATTFIELD, Ph.D., F.R.S., F.I.C., F.C.S.

Demonstrator—Mr. F. W. SHORT. *Assistant-Demonstrator*—Mr. E. J. EASTES.

Laboratories for practical instruction in Chemistry as applied to Pharmacy, Manufactures, Analysis, and Original Research. The Session commences on Thursday, October 1, at Ten a.m. The Laboratories are open from Ten o'clock in the morning until Five in the afternoon daily, except on Saturdays, when they are closed at Two o'clock. Entries can be made for any period at any time.

FEES.										
	HOURS OF STUDY	ONE MONTH	TWO MONTHS	THREE MONTHS	FIVE MONTHS	TEN MONTHS				
	10.0 to 5.0 daily (Sat. 10.0 to 2.0) ...	£4 4 0	7 7 0	10 10 0	15 15 0	26 5 0				
	10.0 to 5.0 on any three days weekly ...	2 17 6	4 17 6	6 16 6	10 10 0	17 17 0				
	10.0 to 5.0 on any two days weekly ...	2 2 0	3 10 0	4 17 6	7 7 0	12 12 0				
	Any three hours daily ...	2 17 6	4 17 6	6 16 6	10 10 0	17 17 0				
	Any two hours daily ...	2 2 0	3 10 0	4 17 6	7 7 0	12 12 0				

PRACTICAL PHARMACY.

Demonstrator—JOSEPH INCE, F.L.S., under the direction of Emeritus Professor REDWOOD.

This class meets twice a week for instruction in the reading of prescriptions, practical dispensing, and the recognition of galenical preparations of the Pharmacopoeia, together with the knowledge of their composition. Separate entries must be made for this class. Fee for one Course (five months), £1 1s.

A NEW PROSPECTUS OF THE SCHOOL IS NOW READY.

Application for Admission to the School, for Prospectuses, or for further information, may be made to the Professors or to their Assistants, in the Lecture Theatre or Laboratories, 17 Bloomsbury Square, London, W.C.

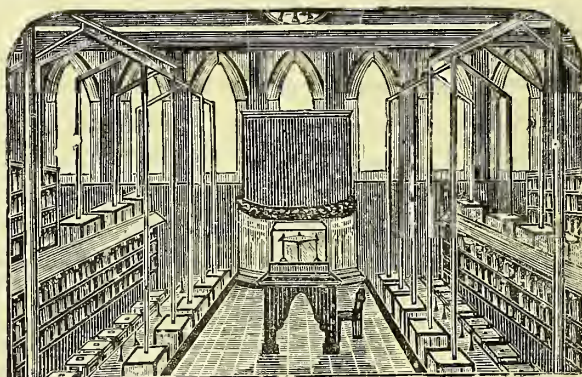
"SYSTEMA OMNIA VINCIT."

SOUTH LONDON SCHOOL OF PHARMACY.

Managing Director,

DR. MUTER, M.A.,

F.C.S., F.I.C., &c.



SCHOOL BUILDING

AND

LABORATORIES,

325 Kennington

Road, S.E.

EIGHTEENTH SESSION, 1885-6.

PUBLIC COURSE.

The regular Session work will begin on SEPTEMBER 15th, when the following Courses of Instruction will be commenced:—

Theoretical Chemistry	-	60 Lectures,
Botany	- - -	30 Lectures,
Materia Medica	- - -	30 Lectures,

with Daily Classes in Latin, Pharmacy, and Practical Dispensing.

The Laboratory is open for Practical Chemistry from 10 till 1 and 2 till 5. The Junior Course includes the manufacture of chemicals and qualitative analysis; and the Senior extends to quantitative (both volumetric and gravimetric) and ultimate organic analysis. All chemicals and expensive apparatus are supplied free of charge.

FEES—*Perpetual Fee to all Lectures, £4 4s. Junior Laboratory, £2 2s. per month.*

PRIZES AND CERTIFICATES.

These are competed for at Examinations held by visiting examiners at the conclusion of each course of lectures. Certificates of Attendance on the lectures are issued to all who attend regularly.

For any further particulars apply to

W. BAXTER, Secretary.

DR. MUTER'S WORKS FOR MEDICAL STUDENTS.

PHARMACEUTICAL AND MEDICAL CHEMISTRY (Theoretical Part). Second Edition.
Price 10s. 6d.

PHARMACEUTICAL AND MEDICAL CHEMISTRY (Practical Part). Second Edition.
Price 7s. 6d.

ORGANIC MATERIA MEDICA. Fifth Edition. Price 12s. 6d.

This Series of Text-Books is too well known to require comment.

"To Students it is simply invaluable."—*Students' Journal.*

Published at the SCHOOL OFFICES, 325 Kennington Road, by W. BAXTER; and Sold by BAILLIÈRE, TINDALL & COX, and SIMPKIN & MARSHALL, London.

THE WESTMINSTER COLLEGE OF CHEMISTRY

The object of this School is to impart to Students a thorough knowledge of the subjects which are required in a pharmaceutical and chemical education of the highest standard, and which at the same time shall fit them for passing the Minor and Major Examinations of the Pharmaceutical Society.

The next Term for the December and February Examinations will be commenced on Monday, October 26. Students can enter at any time, but are advised to enter at the commencement of a Course.

Unusual facilities are offered in this establishment for Major Students. The Principals being in possession of all the necessary apparatus, each subject is taught in a thoroughly practical manner, which renders a failure almost impossible.

PRELIMINARY STUDENTS.

Classes are held daily at the following hours, to prepare Students for the Preliminary Examination of the Pharmaceutical Society:—10 till 11 A.M., LATIN and ESSAY WRITING; 11 to 12 A.M., ENGLISH and ARITHMETIC.

EVENING LECTURES, CLASSES, & LABORATORY INSTRUCTION

EVERY TUESDAY, THURSDAY, AND FRIDAY.

By means of these Classes, gentlemen engaged during the day, and unable to leave business to attend the Day Lectures, may be prepared in the evening for the various examinations of the Pharmaceutical Society.

FEES { MINOR—One Month, 10s. 6d.; Three Months, £1 1s.; Twelve Months, £3 3s.
PRELIMINARY—One Month, 6s.; Three Months, 15s.

Omnibuses and Trams pass the School very few minutes, so that Students can readily obtain access from any part of London.

The List of successful Students from this College, which are published in the PHARMACEUTICAL JOURNAL after each examination, furnish a sufficient proof of the thoroughness of the Education imparted, and of the success which has attended Candidates presenting themselves for examination.

PASS LIST FOR THE SESSION 1884-85.

October.	December.	February.	April.	July.
MINOR.	MINOR.	MINOR.	MINOR.	MINOR.
Mr. T. Buxton	Mr. W. Ballard	Mr. E. A. Andrews	Mr. A. Althorp	Mr. F. W. Bussam
" W. E. Crasweller	" F. W. Biggs	" J. S. Aspell	" A. Blidberg	" L. Brown
" F. Deighton	" W. Bishop	" R. Bayley	" J. Bloomer	" T. A. Burgess
" J. C. B. Duncan	" G. Brigham	" N. Couve	" J. H. Bowskill	" W. J. Campbell
" G. R. Ellison	" W. J. Collett	" A. Dolling	" E. Carpenter	" G. F. Elmitt
" W. H. Fitzhugh	" O. A. Clark	" J. T. Davies	" J. W. Cockcroft	" R. Gardner
" E. O. Jones	" F. B. Dell	" C. B. Gibson	" G. H. Cuff	" J. W. Griffin
" E. H. Judge	" P. Gray	" A. H. Haddon	" B. Dodds	" B. S. Hine
" W. F. Livesey	" W. Lowther	" E. Hands	" A. Ellithorpe	" T. Hodgkinson
" I. T. Lloyd	" W. Parker	" J. G. Henderson	" A. G. Everard	" H. G. Hunt
" T. Marratt	" H. Parks	" T. E. Heynes	" W. J. Farren	" J. V. Llewellyn
" R. J. Marshallsay	" J. Peole	" C. T. Holloway	" C. W. Flack	" H. Lyon
" F. A. Monk	" E. T. Sage	" A. Jackson	" J. Halliwell	" W. J. Maltby
" H. W. G. Morris	" W. W. Smee	" H. A. James	" A. D. Markham	" W. Prieley
" A. H. Norman	" A. W. Smith	" D. E. Jenkins	" C. B. Shuker	" P. Randall
" G. Phillips	" C. H. Temple	" T. Jones	" W. B. Spencer	" S. T. Rhoden
" H. A. Pimm	" J. F. Thiele	" A. C. Kendall	" A. Twivey	" W. Rickard
" H. Sara	" J. Tibbits	" H. Lacy	" C. S. Tyler	" C. M. Snow
" J. H. Smith	" C. P. Tregellas	" C. Love		" J. E. Southon
" T. Topham	" J. A. Wheldon	" V. W. Meacham		" E. Thomas
" P. Tucker		" A. L. Meadley		" R. J. Wilson
" W. Worsley		" A. Minet		
	MAJOR.		MAJOR.	MAJOR.
	Mr. A. Banks		Mr. C. O. Morrison	Mr. W. J. Baker
			" E. H. Tugwell	" A. Tennant
			Mrs. M. A. Sinclair	" D. W. R. Wilson
		MAJOR.		
		Mr. W. Barker		
		" W. G. Briggs		
		" H. S. Herbert		
		" W. Jackson		
		" J. B. Purvis		
		" A. Turner		
			PRELIMINARY.	PRELIMINARY.
PRELIMINARY.				
			April.	July.
October.	January.		Mr. H. G. Northwood	Mr. J. H. Crane
Mr. T. J. Green	Mr. W. Bradley			" J. W. Douglas
" L. Peacock	" A. Curson			" M. Hargrave
	" C. J. Chew			" H. Hurley
	" W. H. Jennings			" J. Garibaldi
	" H. M. King			" J. W. Green
	" C. Morrell			" F. J. Loveday
	" B. Smith			

For Revised Prospectus and further particulars, apply personally or by letter, to Messrs. WILLS & WOOTTON, Westminster College, Trinity Square, Borough, LONDON, S.E.

UNIVERSITY OF GLASGOW

SESSION 1885-86.

THE MEDICAL SESSION will be opened with an Introductory Discourse by Professor BOWER, M.A., F.L.S., on **TUESDAY**, the 27th OCTOBER, 1885.

WINTER COURSES.

Zoology, 9 a.m.—Professor Young.

Clinical Medicine, 9 a.m.—Professor McCall Anderson and Professor Gairdner.

Clinical Surgery, 9 a.m.—Professor George Buchanan and Professor Macleod.

Chemistry, 10 a.m.; and Chemical Laboratory, 10 a.m. to 4 p.m.—Professor Ferguson.

Anatomy: Senior, 11 a.m.; Junior, 2 p.m.; and Practical Anatomy, 9 a.m. to 4 p.m.—Professor Cleland, assisted by J. Yule Mackay, M.D., and other Demonstrators.

Practice of Physic, 11 a.m.—Professor Gairdner.

Materia Medica, 12 noon, and Pharmaceutical Laboratory.—Professor Charteris and Dr. Napier.

Institutes of Medicine, 12 noon, and Physiological Laboratory.—Professor McKendrick, assisted by J. McGregor Robertson, M.A., M.B., the Muirhead Demonstrator.

Surgery, 1 p.m.—Professor Macleod.

Midwifery, 2 p.m.—Professor Leishman.

Public Health.—Professor Simpson.

SUMMER SESSION.

During the Summer Session, which opens on 1st May, the Courses of Botany (Professor Bower), Practical Chemistry, Forensic Medicine (Professor Simpson), and Clinical Medicine and Clinical Surgery are given. There are also Courses of Anatomy (Lectures on Embryology), Practical Anatomy, Zoology, Practical Zoology, Vegetable Histology, and Practical Botany, Practical Physiology (including Histology), Practical Materia Medica, Practice of Physic, Practical Pathological Histology, Operative Surgery, and Lectures on Diseases of Women.

LECTURERS.—Pathology—The Courses of the Pathologist of the Western Infirmary, Dr. Joseph Coats, and of the Pathologist of the Royal Infirmary are recognised.

Diseases of the Eye.—Thomas Reid, M.D., Waltonian Lecturer (Summer Course).

Insanity.—Dr. David Yellowlees, Royal Asylum, Gartnavel (Summer Course).

WESTERN INFIRMARY.—This Hospital, near the University, contains 400 beds for Medical and Surgical Patients, also Wards for Skin Diseases, and one for Diseases peculiar to Females.

DEGREES.—Three Medical Degrees are conferred, viz.: Bachelor of Medicine (M.B.) and Master of Surgery (C.M.), which must be taken together, and Doctor of Medicine (M.D.); all of which are recognised by the Medical Act as qualifying for practice throughout the British Dominions.

COST OF EDUCATION.—The Fee for each class is £3 3s., and the total minimum expenses for classes, hospital, and graduation fees for M.B. and C.M. amount to about £90. The fee for M.D. is £15 8s.

BURSARIES.—Bursaries to the annual amount of £1,150 may be held by students during their medical studies.

Full particulars connected with the course of education and examination required for the Degrees, and the Preliminary Examination required to be passed by Students before beginning medical study, will be found in the University Calendar (by post 3s.); or a syllabus of the regulations, fees, &c., may be obtained by applying to Mr. MOIR, Assistant Clerk of Senate.

KING'S COLLEGE, LONDON. — MEDICAL

DEPARTMENT.—The WINTER SESSION will be OPENED on Thursday, October 1st, at Four P.M., when the Distribution of Prizes will take place, and an Address be given by the Right Hon. and Right Rev. the Lord Bishop of London.

PROFESSORS.

Anatomy—Professor John Curnow, M.D., F.R.C.P.
Demonstrator—A. S. Kenny.

Physiology and Practical Physiology—Professor Gerald F. Yeo, M.D.
Demonstrators—J. W. Groves, F.C.S., T. W. Barrett, M.B., and E. F. Herroun.

Chemistry and Practical Chemistry—Professor C. L. Bloxam, F.C.S.
Demonstrators—J. M. Thomson, F.R.S.E., F.C.S., and G. S. Johnson.

Medicine (Principles and Practice of)—Professor L. S. Beale, M.B., F.R.S.

Clinical Medicine—Professor George Johnson, M.D., F.R.S.

Surgery and Practical Surgery—Professor Henry Smith, F.R.C.S.

Demonstrators—H. Royce Bell, F.R.C.S., W. Rose, B.S., M.B., F.R.C.S., W. W. Cheyne, F.R.C.S., C.M.

Clinical Surgery—Professor Wood, F.R.S., Professor Sir Joseph Lister, Bart., F.R.S.

Botany—Professor Bentley, F.L.S.

Materia Medica and Therapeutics—Professor N. I. C. Tirard, M.D.

Obstetric Medicine and the Diseases of Women and Children—Professor W. Playfair, M.D., F.R.C.P.

Forensic Medicine—Professor D. Ferrier, M.D., F.R.S.

Comparative Anatomy and Zoology—Professor F. Jeffrey Bell, M.A.

Pathological Anatomy—Professor A. B. Duffin, M.D., F.R.C.P.

Hygiene—Professor Charles Kelly, M.D., F.R.C.P.

Clinical Therapeutics—Professor Burney Yeo, M.D.

Dental Surgery—Professor S. Hamilton Cartwright, M.R.C.S.

Ophthalmology—Professor M. M. McHardy, F.R.C.S. Ed.

Psychological Medicine—Professor Edgar Sheppard, M.D.

Dean of the Faculty—Professor Curnow, M.D.

Tutors—H. Jackson, E. F. Herroun, J. W. Groves.

PRELIMINARY SCIENTIFIC AND INTERMEDIATE SCIENCE EXAMINATIONS OF THE UNIVERSITY OF LONDON.

Special Courses of Lectures and Practical Instruction in the Chemical, Physical, and Physiological Laboratories have been arranged for Students preparing for these examinations at the University of London.

KING'S COLLEGE HOSPITAL.

Clinical Lectures are given daily by the Physicians and Surgeons.

Clinical instruction is also given in Diseases of the Eye and Throat, in Skin Diseases, and in Diseases of the Ear.

Physicians—Dr. G. Johnson, Dr. L. S. Beale, Dr. Duffin, Dr. Burney Yeo, Dr. Ferrier, Dr. Curnow.

Physicians for Diseases of Women and Children and Physician-Accoucheurs—Dr. W. Playfair, Dr. T. C. Hayes.

Surgeons—John Wood, F.R.S., Sir Joseph Lister, Bart., F.R.S., H. Smith, F.R.C.S., H. Royce Bell, F.R.C.S., William Rose, F.R.C.S.

Assistant-Surgeon—W. W. Cheyne, F.R.C.S.

Assistant-Physician—Dr. Tirard.

Dental Surgeon—S. Hamilton Cartwright, M.R.C.S.

Ophthalmic Surgeon—M. M. McHardy, F.R.C.S. Edin.

Aural Surgeon—Urban Pritchard, F.R.C.S., M.D.

Pathological Registrar—N. Dalton, M.D.

Chloroformist—Charles Moss, M.R.C.S.

Vaccinator—R. W. Dunn, M.R.C.S.

Dental, Aural, Skin, and Throat Departments, and Wards for Children and Ophthalmic Cases are attached to the Hospital.

The Physician's Assistant, Physician-Accoucheur's Assistant, and House-Surgeons, their Assistants, Clinical Clerks, and Dressers, are selected by examination from among the Students, without extra fees; the Resident Officers have rooms and commons free.

SCHOLARSHIPS, EXHIBITIONS, REGISTRARSHIPS, AND PRIZES.

WARNEFORD SCHOLARSHIPS.—Students entering the Medical Department of the College in October will have the exclusive privilege of contending for two Scholarships of £75 each. These Scholarships are given for proficiency in Divinity, Classics, Mathematics, History, and English.

Five Medical Scholarships are awarded at the close of each Winter Session for proficiency in professional subjects—viz., one of £50, one of £30, and three of £20.

A Warneford Scholarship of £50 is also annually awarded for proficiency in Divinity, Medicine, Surgery, and Hospital Practice.

Sambrooke Registrarships.—Two of £50, tenable for two years, are annually awarded to Matriculated Students of this department.

Sambrooke Exhibitions.—Two annually, one of £50 and one of £40, are awarded for proficiency in Mathematics, Experimental Physics, Inorganic Chemistry, Botany, and Zoology.

Daniell Scholarship.—One of £40, given for proficiency in Chemistry.

Rabbeth Scholarship.—One of £20, given for early Scientific Training.

Science Exhibitions.—Two annually, one of £100, and one of £50, given by the Clothworkers' Company.

Endowed Prizes of the value of £25, £15, £10, and £4 4s. each, and other College Prizes of the value of £50 are annually awarded.

For prospectuses or other information apply, personally or by post-card, to J. W. Cunningham, Esq., Secretary, or to Professor Curnow, Dean of the Department.

Nearly ready, in leather, red edges, 6 x 3½, price 3s. 6d.

A Physician's Pharmacopœia

(Abbreviation Ph. Ph.)

Containing prescriptions for the novel method of preparing lozenges, including nitro glycerine, cocaine, &c., and other active remedies in exact doses. Takes the same time as making pills, no drying required. Also other unofficial preparations, with the object of discouraging secret nostrums and securing uniformity in dispensing.

By J. BAILEY, Pharmacist, Margate.

LONDON: J. & A. CHURCHILL, 11 NEW BURLINGTON STREET.

THE LONDON HOSPITAL AND MEDICAL COLLEGE.

HOSPITAL STAFF.

CONSULTING PHYSICIAN—Dr. Ramskill.

CONSULTING SURGEONS—Mr. Curling, F.R.S., Mr. Jonathan Hutchinson, F.R.S.

PHYSICIANS—Sir Andrew Clark, Bart., F.R.S., Dr. Langdon Down, Dr. Hughlings Jackson, F.R.S., Dr. Sutton, Dr. Fenwick, Dr. Stephen Mackenzie, Dr. Sansom, Dr. Charlewood Turner, Dr. Gilbert-Smith.

ASSISTANT-PHYSICIANS—Dr. Warner, Dr. Ralfe.

SURGEONS—Mr. Couper, Mr. Rivington, Mr. Waren Tay, Mr. McCarthy, Mr. Frederick Treves.

ASSISTANT-SURGEONS—Mr. Reeves, Mr. C. Mansell Moullin, Mr. Hurry Fenwick, Mr. F. S. Eve.

OBSTETRIC PHYSICIAN—Dr. Herman.

ASSISTANT OBSTETRIC PHYSICIAN—Dr. Lewers.

OPHTHALMIC SURGEONS—Mr. Waren Tay, Mr. F. S. Eve.

PHYSICIAN TO THE SKIN DEPARTMENT.—Dr. Stephen Mackenzie.

AURAL SURGEONS—Dr. Edwd. Woakes and Mr. T. Mark Hovel.

SURGEON-DENTIST—Mr. Barrett.

LECTURERS.

Medicine—Dr. Stephen Mackenzie.

Surgery—Mr. Rivington.

Operative Surgery—Mr. Rivington.

Practical Surgery—Mr. Reeves.

Anatomy—Mr. Fredk. Treves.

Practical Anatomy—Mr. Mansell Moullin.

Physiology and Practical Histology—Mr. McCarthy.

Chemistry—Dr. C. Meymott Tidy.

Chemical Physics—Mr. F. J. M. Page.

Comparative Anatomy—Mr. C. Mansell Moullin.

Pathology—Dr. Sutton.

Midwifery—Dr. Herman.

Toxicology—Dr. C. Meymott Tidy.

Botany—Dr. F. Warner.

Medical Jurisprudence—Dr. Sansom.

Practical Chemistry—Mr. F. J. M. Page.

Materia Medica—Dr. Prosser James.

Diseases of the Eye—Mr. Waren Tay.

Diseases of the Throat—Dr. Morell Mackenzie.

Diseases of the Ear—Dr. Edwd. Woakes.

Anatomy and Pathology of the Teeth—Mr. Barrett.

As Emeritus Professor of Surgery, Mr. HUTCHINSON will give in the Winter and Summer Sessions short Courses of Lectures in Clinical Surgery, consisting of Six Lectures each. The Special Subjects and the dates will be announced in due course.

The SESSION 1885-86 will commence on Thursday, October 1st, 1885. As the College will be in course of enlargement, there will be no Public Distribution of Prizes this year.

Fee for Lectures and Hospital Practice, 90 guineas in one sum, or 100 guineas by three instalments.

The Hospital contains nearly 800 beds. Number of In-patients during 1884 was 8,015; Out-patients, 61,358.

THE RESIDENT AND OTHER HOSPITAL APPOINTMENTS are free to full Students. The Resident Appointments consist of five House-Physicians, five House-Surgeons, one Accoucheurship, and one Receiving Room Officer. Two Dressers and two Maternity Assistants also reside in the Hospital. The holders of all the Resident Appointments are provided with rooms and board entirely free of expense.

TWO ENTRANCE SCIENCE SCHOLARSHIPS, value £60 and £40, and TWO BUXTON SCHOLARSHIPS, value £30 and £20, will be offered for competition at the end of September to new Students.

The Letheby Prize, value £30, for proficiency in Chemistry.

A Scholarship, value £20, in Human Anatomy and Physiology, to first year's Students.

A Scholarship, value £25, in Anatomy, Physiology, and Chemistry, to second year's Students.

A Scholarship, value £20, in Clinical Medicine.

A Scholarship, value £20, in Clinical Surgery.

A Scholarship, value £20, in Clinical Obstetrics.

A Duckworth Nelson Prize, value £10 (biennial), in Clinical Medicine and Surgery.

The Hutchinson Prize, value £35 (triennial), in Clinical Surgery.

Prizes, value £60, to Dressers of Out-patients in Minor Surgery.

Special Classes for the Preliminary Scientific and Intermediate M.B. Examinations of the University of London, and for the Primary and Pass Examinations for the Fellowship of the Royal College of Surgeons of England, are held throughout the year.

Special entries for Medical and Surgical Practice are made.

The London Hospital is now in direct communication by Rail and Tram with all parts of the Metropolis, and the Metropolitan, Metropolitan District, East London, and South-Eastern Railways have stations within a minute's walk of the Hospital and College.

For Prospectuses and particulars apply personally, or by letter to

Mile End, E. MUNRO SCOTT, Warden.

THE NEW VETERINARY COLLEGE, LEITH WALK, EDINBURGH.

Affiliated by Her Majesty's Royal Sign Manual with the
ROYAL COLLEGE OF VETERINARY SURGEONS.

SESSIONS 1885-86.

THE WINTER SESSION

WILL COMMENCE ON

WEDNESDAY, OCTOBER 28, 1885.

The New College covers an area of over 2,000 square yards, is quadrilateral in shape, and consists of a Lecture Hall and a Lecture Room, large Dissecting-Room, Chemical Laboratory, Physiological and Pathological Laboratory, Museum, Bone-Room, Reading-Room, Pharmacy, Post-mortem Room, and Offices. The Infirmary consists of Seventeen Loose Boxes, a Bath Box, Hot-air Boxes, large Byre, Dog Kennels, and Forge, surrounding an Open Court, which is causewayed down the centre for trotting horses, &c. On one side of the Court is a Covered Yard for casting horses, exercising, &c.

VETERINARY MEDICINE AND SURGERY:

Professor WILLIAMS, F.R.S.E., F.R.C.V.S., F.R.P.S., Principal, Ex-President of the Royal College of Veterinary Surgeons, Professor of Veterinary Surgery to the Highland and Agricultural Society of Scotland, Foreign Correspondent of the Société Centrale de Médecine Vétérinaire, &c.

PHYSIOLOGY AND PRACTICAL HISTOLOGY:

Professor JAMES HUNTER, F.R.C.S.E., L.R.C.P.E.

ANATOMY OF THE DOMESTICATED ANIMALS:

Professor LEWIS, M.R.C.V.S.

CHEMISTRY, PRACTICAL CHEMISTRY, AND TOXICOLOGY:

Professor IVISON MACADAM, F.R.P.S., &c., &c.

MATERIA MEDICA AND THERAPEUTICS:

Professor LEWIS, M.R.C.V.S.

BOTANY: Professor A. N. McALPINE, B.Sc. Lond.

MORBID ANATOMY: Mr. W. O. WILLIAMS, M.R.C.V.S.

NATURAL HISTORY AND PARASITES OF THE DOMESTIC ANIMALS:

Professor McALPINE.

PRACTICAL PHARMACY: Mr. W. O. WILLIAMS, F.R.P.S.

CLINICAL INSTRUCTION: The Principal and Assistants.

Prospectus and full information on application to the Secretary,
W. OWEN WILLIAMS.

ROYAL (DICK'S) VETERINARY COLLEGE, CLYDE STREET, EDINBURGH.

FOUNDED BY THE LATE PROFESSOR DICK IN 1823.

Trustees:

LORD PROVOST, MAGISTRATES AND COUNCIL OF THE
CITY OF EDINBURGH.

Principal:

PROFESSOR THOMAS WALLEY, M.R.C.V.S.

WINTER SESSION commences on the 26th October,
Preliminary Examination, 26th & 27th October.

Prospectuses and Full Particulars on application.

CLASSES OPEN TO AMATEURS.

ROYAL COLLEGE OF SCIENCE FOR IRELAND, STEPHEN'S GREEN, DUBLIN.

SCIENTIFIC AND TECHNICAL EDUCATION.

SESSION 1885-86.

This College supplies a complete Course of Instruction in Science, as applied to the Industrial Arts, especially those which may be classed broadly under the heads of **CHEMICAL MANUFACTURES, MINING, and ENGINEERING.**

A Diploma of Associate of the College is granted at the end of the Three Years' Course.

There are Four Royal Scholarships, tenable for two years, each of the value of £50 yearly, with free education, including Laboratory Instruction. Two become vacant each year. They are given to Students who have been a year in the College.

The Fees are £2 for each Course, or £10 for all the Courses of each year, with the exception of Laboratory Practice and Drawing.

Chemistry (Theoretical and Practical), Metallurgy, &c.	Professor HARTLEY, F.R.S., F.C.S., F.R.S.E.
Mathematics, Mechanics, and Mechanism	Professor HENNESSY, F.R.S., M.R.I.A.
Descriptive Geometry, Drawing, Engineering, and Surveying ..	Professor PIGOT, C.E., M.R.I.A.
Experimental Physics (Theoretical and Practical)	Professor BARRETT, F.R.S.E., M.R.I.A.
Mining and Mineralogy	Professor O'REILLY, C.E., M.R.I.A.
Botany	Professor M'NAB, M.D., F.L.S., Dean of Faculty.
Zoology	Professor HADDON, M.A., F.Z.S.
Geology	Professor HULL, M.A., LL.D., F.R.S.
Paleontology	Mr. BAILY, F.L.S., F.G.S., M.R.I.A.

The Chemical and Physical Laboratories and Drawing School are open daily for Practical Instruction.

Fee for Chemical Laboratory, £2 for One Month, £5 for Three Months, £9 for Six Months, or £12 for Session. Fee for Physical Laboratory, £1 per Month, or £6 for Session. Fee for Biological Laboratory, £2 for the term. Fee for Drawing School, £3 for Session, or £2 for one term.

The SESSION COMMENCES on MONDAY, OCTOBER 5th.

Programmes may be obtained on application at the College, or by letter addressed to the Secretary, Royal College of Science, Stephen's Green, Dublin. Professor J. P. O'REILLY, Secretary.

TO DENTISTS AND CHEMISTS.—Every description of Artificial Teeth made at greatly reduced charges. Best work and best materials only.

An Upper or Lower Set, inclusive of Teeth Rubber, &c., £1 1s.
Ditto, ditto, on Platina, £2 2s.

Send for Price List.

Twenty years' experience in mechanical work.

LESSONS GIVEN IN MECHANICAL DENTISTRY.

F. BUCK, 6 Hanover Place, Upper Baker Street, London, N.W.

EDINBURGH PHARMACEUTICAL CLASSES.

DAY and EVENING CLASSES for PHARMACEUTICAL STUDENTS are conducted in the Class-rooms and Laboratories, 41 Chambers Street, Edinburgh.

CHEMISTRY (Lectures { Dr. DRINKWATER, F.C.S.
and Laboratory) ... { Lecturer Ed. Sch. of Medicine.

INSTRUCTION BY CORRESPONDENCE.

For all particulars apply to Dr. DRINKWATER, Chemical Laboratory, 41 Chambers Street, Edinburgh.

LONDON HOMŒOPATHIC HOSPITAL

AND

MEDICAL SCHOOL,

GREAT ORMOND ST., BLOOMSBURY.

WINTER SESSION, 1885-86.

The WINTER SESSION will commence on Monday, October 5th, at 5 P.M., when the annual *Hahnemannian Oration* will be delivered by D. Dyce Brown, M.A., M.D., after which the Lectures and Hospital Practice in the Wards and Out-Patients' Department will be resumed.

It may be presumed that a valuable opportunity is thus afforded of acquiring a knowledge of homœopathic medicine.

Full particulars may be obtained from the Honorary Secretary of the Medical School, Dr. J. Galley Blackley, who will attend at the Hospital on Mondays and Thursdays, from 2.30 to 4.30 P.M., for the purpose of giving information to intending Students.

By order,

Sept., 1885.

G. A. CROSS,

Secretary.

GUY'S HOSPITAL.

THE MEDICAL SESSION COMMENCES ON

THURSDAY, OCTOBER 1.

The Hospital contains, besides the Beds for Medical and Surgical Cases, Wards for Obstetric, Ophthalmic, and other special departments.

Special Classes are held in the Hospital for Students preparing for the examinations of the University of London and of other examining boards.

APPOINTMENTS.—The House-Surgeons and House-Physicians, the Obstetric Residents, Clinical Assistants and Dressers, are selected from the Students, according to merit, and without payment. There are also a large number of Junior Appointments, every part of the Hospital Practice being systematically employed for instruction.

ENTRANCE SCHOLARSHIPS.—Open Scholarship, of One Hundred and Twenty-five Guineas, in Classics, Mathematics, and Modern Languages. Open Scholarship, of One Hundred and Twenty-five Guineas, in Chemistry, Physics, Botany, and Zoology.

PRIZES, &c.—Six Scholarships, varying in value from £10 to £50 each, for general proficiency in Medical Study. The Treasurer's Gold Medal in Medicine; the Treasurer's Gold Medal in Surgery; the Gurney Hoare Prize of £25, for Clinical Study; the Beaney Prize of 30 guineas for Pathology; the Sands Cox Scholarship of £15 per annum for three years, for Physiology; the Joseph Hoare Prize of £25 and £10; the Michael Harris Prize of £10, for Anatomy; the Mackenzie Bacon Prize of £10 for Ophthalmoscopy; the Mackenzie Bacon Prize for Nervous Diseases, of £15; the Burdett Prize for Hygiene, value £10.

For prospectus and further information apply to the Dean, Dr. F. Taylor, Guy's Hospital, London, S.E.

July 1885.

E. CETTI,

WHOLESALE MANUFACTURER OF ALL KINDS OF METEOROLOGICAL INSTRUMENTS.

Mercurial and Aneroid Barometers, Thermometers, Rain and Vacuum Gauges. Makers of all the latest improved Clinical Thermometers, Gas and Water Analysis Apparatus (Frankland's, M'Leod's, and Thomas's), Mercurial Pumps of all kinds, Chemical and Scientific Apparatus for Analysis and Laboratory use.

A large assortment of Graduated Measures and Funnels always in stock.

Special designs in Glass Blowing carried out on the Premises.

36 BROOKE ST., HOLBORN, LONDON. Glass Works: PRATT ST., LAMBETH.

NOTICE. NEW PHARMACOPŒIA. THE LAMELLÆ OF THE NEW PHARMACOPŒIA

Can be obtained in Bulk and in Tubes of
SAVORY & MOORE, 143 NEW BOND STREET, LONDON.

BRITISH PHARMACOPŒIA.

INTIMATION IS HEREBY GIVEN, that the Official Notice of the publication of the New Edition of the *British Pharmacopœia* was inserted in the *London, Edinburgh, and Dublin Gazettes*, on September 1, 1885, in accordance with the *Medical Acts*, 21 and 22 Vict., cap. 90, and 25 and 26 Vict., cap. 91, and that copies of the work may now be obtained (price 6s., post free 6s. 6d.) from the **Medical Council Office** (299 Oxford Street, London, W.), or from **Messrs. Spottiswoode & Co.** (54 Gracechurch Street, London, E.C.)

THE CENTRAL SCHOOL OF CHEMISTRY AND PHARMACY, 173 MARYLEBONE ROAD, N.W.

LECTURERS—MR. JOHN WOODLAND, F.L.S., F.C.S., &c., and MR. J. F. BURNETT, F.C.S., M.P.S., &c.

The next complete course of lectures will commence on Wednesday, September 2, 1885. Fees—To the October examination, 6 guineas; to the December examination, 10 guineas.

Evening Classes will also be commenced for Major and Minor Students, and will be held from 7.30 to 9 p.m.

Mr. J. E. SAUL, the Pereira Medallist of this year, passed his Major Examination from this School in December last.

THE LIVERPOOL SCHOOL OF PHARMACY, 36 OXFORD STREET, LIVERPOOL.

PRINCIPAL—J. S. WARD, M.P.S., Ph.Ch., PRIZE MEDALLIST, AND SOUTH KENSINGTON PRIZEMAN.

LIST OF CLASSES AND FEES.

MINOR CLASSES (DAY) are held daily from 10 A.M. to 5 P.M. Saturday, 10 A.M. to 1 P.M. Fees: 1 month, £3; 3 months, £7 10s.; 6 months, £12 12s.

MINOR CLASSES (EVENING), on Mondays, Wednesdays, and Fridays, from 8 to 10 o'clock. Fees: 1 month, £1; 6 months, £4 10s.

MAJOR CLASSES (AFTERNOON), on Tuesdays and Fridays, 3 to 7 P.M.

MAJOR CLASSES (EVENING), on Tuesdays and Thursdays, 7 to 10 P.M. Fee for either course: 6 months, £4 10s.; 12 months, £7 10s.

PRELIMINARY CLASSES (AFTERNOON), on Tuesdays and Thursdays, 3 to 5 P.M.

PRELIMINARY CLASSES (EVENING), on Mondays and Fridays, 8 to 10 o'clock.

Fee for either course, £2 2s. per quarter.

All Fees payable in advance. All apparatus (except test-tubes) provided free of cost. Indoor pupils received at £4 4s. per month. During the past year the School developed wonderfully, and in November Major Classes were started, which also promise to be a great success. Prospectus, with full particulars of Major, Minor, and Preliminary Classes, Terms, &c., sent free on application.

STUDENTS' AIDS TO EXAMINATION.

PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 6d. Latin Grammar and Caesar Simplified, 1s. MINOR—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Minor Questions, gratis. Notes on Dispensing, 1s. Prescriptions given at the Minor, 1s. For "How to Prepare for either Exam.," enclose stamped envelope, "Chemist," care of Mr. J. EDWARDS, Wye, Kent.

TULLY'S POSTAL TEACHING,

For the Minor, Modified, and Preliminary,

WAS established in 1872, and notwithstanding many imitations, continues to hold its prestige as the best and most successful method ever offered to Students for obtaining that thorough knowledge necessary to qualify for Examination, without leaving home. Every Student desiring to ensure success should study under this system. Fees: Minor or Modified, One Guinea; Preliminary, 10s. 6d. Send for particulars to

Mr. J. TULLY (Hills Prizeman),

185 St. George's Road, West Hill, Hastings.

THE MASON COLLEGE, BIRMINGHAM.

SESSION 1885-86.

FACULTIES OF ARTS AND SCIENCE.

The Session commences on THURSDAY, OCTOBER 1.

All Departments of the College are open to Both Sexes on the same terms. Special arrangements are made for the convenience of Ladies.

Syllabuses, containing full information as to the Admission of Students, Courses of Instruction, Fees, Entrance and other Scholarships, &c., are now ready, and may be had from Messrs. CORNISH, New Street, Birmingham; price 3d., by post 4½d.

GEO. H. MORLEY, Secretary.

ALMANACKS for 1886,

IN ORIGINAL AND ARTISTIC DESIGNS.

FORD, SHAPLAND & CO.,

LABEL AND GENERAL PRINTERS, ETC.,

6 GREAT TURNSTILE, High Holborn, LONDON, W.C.,

HAVE NOW READY THEIR

CHEMISTS' ALMANACKS AND CARD CALENDARS FOR 1886,

Specimens of which they will be pleased to forward on application, post free.

CHEMISTS' COUNTER BILLS,

ON GOOD PAPER, AT LOWEST PRICES EVER OFFERED.

10,000 CROWN 8vo. BILLS **12s. 6d.**
(7½ in. × 5 in.)

10,000 DEMY 8vo. BILLS **18s.**
(9 in. × 5½ in.)

ALL OTHER SIZES AT EQUALLY LOW RATES. SAMPLES ON APPLICATION.

LABELS of every description. SLIP LABELS from 1s. per 1,000.

Pamphlets, Lists, Circulars, Billheads, Memorandums, Cards, and all kinds of Printing and Stationery required by Chemists at most Moderate Prices.

CHEMISTS' LABELS,

TO ORDER AND IN STOCK.

THE BASKERVILLE PRINTING CO., LTD.,

4 HARRINGTON STREET, LIVERPOOL,

IN ADDITION TO THE ABOVE, ARE

ECONOMIC SHOWCARD PRINTERS.

A Sample and Price of this Speciality will be sent on application

CHEMISTS' HANDBILLS

20,000 (9 × 5½ in.), **35s.** may be of two kinds.

Specimens on receipt of halfpenny stamp. Proof if desired. Cash must accompany order. They are too cheap to book.

W. R. KING, Upper Priory, BIRMINGHAM.

IT WILL PAY YOU to send for Estimates to
BOWERS BROTHERS, 89 BLACKFRIARS ROAD, LONDON, S.E.
MEDICAL AND GENERAL PRINTERS,

10,000 Good Effective Handbills, 7½ in. by 5 in. ... 14s.
1,000 000 do. do. ... 23s.
100,000 Pamphlets ... 25s.
Superfine Fly Leaf Note Paper ... per ream 8s.

Seed, Powder, Cash, Prescription and Recipe Envelopes in all qualities and in every style of printing, Counter and Show Bills, Trade Catalogues, Prices Current Business Circulars, and Ornamental Advertising Books at most moderate charges. Specimens and Estimates free.

DON'T ORDER BEFORE SEEING BOWERS' TOILET ALMANAC—CHEAP, GOOD, USEFUL.

A liberal discount to large consumers. Carriage paid on parcels of 40s. and upwards.

Silverlock's

NOW READY.

SACHET, PRESENTATION, AND CARD

Samples
Post Free.

Almanacks,

FOR 1886.

H. SILVERLOCK, 92, BLACKFRIARS ROAD, LONDON. S.E.

WATERPROOF AND GREASEPROOF

WAX TISSUE

Used by Chemists, Soap Makers, and Confectioners.

It does not adhere, is cheaper than Tin-foil or other substitutes.
This Tissue is specially prepared free from TASTE or SMELL.

PRICES (Special Terms for large quantities).—Half-Sheet Post Free.—Size 20 by 30 inches, 9/3 Ream, 8d. Quire; 17½ by 30 inches, 8/3 Ream, 7d. Quire; 15 by 30 inches, 7/3 Ream, 6d. Quire; Sample Quire Post free (20 by 30 in.), 11d.

F. G. KETTLE,

WHOLESALE AND RETAIL STATIONER,

11 KINGSGATE STREET, LONDON, W.C.

JAMES TOWNSEND,

Medical Label Printer,

✱ LITTLE QUEEN STREET, EXETER. ✱

TOWNSEND'S UNIVERSAL

SEND FOR SAMPLES.

CHEMISTS' BOOK ALMANACK

Crown 8vo. size ($7\frac{1}{4}$ ins. by $4\frac{3}{4}$ ins.), 16 pages and cover, containing 12 pages of Calendar, 1 page of Postal Information, leaving seven pages, including the title page, for the insertion of customers' own matter. Price complete—250, 35/-; 500, 45/-; 1,000, 62/6; 2,000, £4 7s. 6d.

The same Almanack as above, 24 pages and cover, therefore leaving 15 pages for the insertion of customers' own matter. Price complete—250, 60/-; 500, 72/6; 1,000, 90/-; 2,000, £6 10s.

TOWNSEND'S

SEND FOR SAMPLES.

BOUQUET ALMANACK

—(Size $3\frac{1}{2}$ ins. by $2\frac{1}{4}$ ins.) 32 pages with attractive Cover, Calendar, Postal and other information, Rules for Sick Room, pages for Specialities and general requisites.

SPECIAL FEATURE.—Memoranda pages in addition, without extra charge.

Price complete—250, 20/-; 500, 32/-; 1,000, 50/-;

which include the name on the Cover, name and address at the head of each page, the page of address to customers, and three other pages. The alteration of any other pages is charged 1/- per page. If page on back of Cover is printed, 2/- will be the extra charge.

TOWNSEND'S

SEND FOR SAMPLES.

PURSE ALMANACK

—(Size $2\frac{5}{8}$ ins. by $1\frac{3}{4}$ ins.) 32 pages, with fancy cover, useful information, and pages for advertising various articles.

Price complete—250, 20/-; 500, 32/-; 1,000, 50/-;

which include the name on the cover, name at the head of each page, the page of address to customers, and three other pages. The alteration of any other pages is charged 1/- per page. If page on back of Cover is printed, 2/- will be the extra charge.

TOWNSEND'S

SEND FOR SAMPLES.

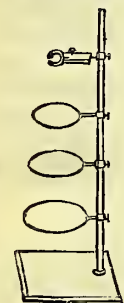
CARD CALENDARS.

		250	500	1,000	2,000	3,000
M SERIES. $2\frac{1}{2}$ ins. by 4 ins. } Single Card, giving 2 pages.	Printed in one color	7/-	8/6	11/6	at 9/-	at 7/6 per 1,000
	Printed in two colors	12/6	14/6	17/6	at 12/-	at 10/6 „
M SERIES. $2\frac{1}{2}$ ins. by 4 ins. } Fly-leaf, giving 4 pages.	Printed in one color	10/-	12/6	17/-	at 12/6	at 10/6 per 1,000
	Printed in two colors	16/-	18/6	24/-	at 17/-	at 15/- „
N SERIES. $4\frac{1}{2}$ ins. by 3 ins. } Single Card, giving 2 pages	Printed in one color	7/6	9/-	12/6	at 9/-	at 8/- per 1,000
	Printed in two colors	13/-	15/6	18/6	at 13/6	at 11/6 „
N SERIES. $4\frac{1}{2}$ ins. by 3 ins. } Fly-leaf, giving 4 pages.	Printed in one color	11/-	14/-	20/-	at 15/-	at 13/6 per 1,000
	Printed in two colors	17/6	20/-	25/-	at 18/6	at 16/6 „
O SERIES. $3\frac{3}{4}$ ins. by $2\frac{1}{4}$ ins. } Fly-leaf, giving 4 pages.	Printed in three colors	250 13/6	500 18/-	1,000 28/6	2,000 at 24/-	3,000 at 21/- per 1,000

HANDBILLS

Crown 8vo. } 5,000, 6/9; 10,000, 11/6
 $7\frac{1}{4} \times 4\frac{3}{4}$
 Demy 8vo. } 5,000, 11/6; 10,000, 18/-
 $8\frac{1}{4} \times 5\frac{1}{4}$
 SPECIAL LINES.

CHEMISTS' ALMANACKS FOR 1886.



J. ORME & CO.

(Late M. JACKSON & CO.),

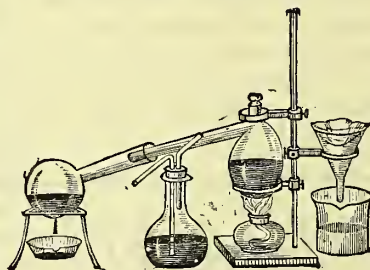
MANUFACTURERS

OF

SCIENTIFIC APPARATUS,

AND IMPORTERS OF

Finest BOHEMIAN
and GERMAN
GLASS AND PORCELAIN
**CHEMICAL
APPARATUS,**



ALSO
**PURE
CHEMICALS**
For Analysis,

*By appointment to Her Majesty's Honourable Board of Inland Revenue;
Science and Art Department and Government Schools at South
Kensington; the Pharmaceutical Society of Great Britain,
&c., &c.*

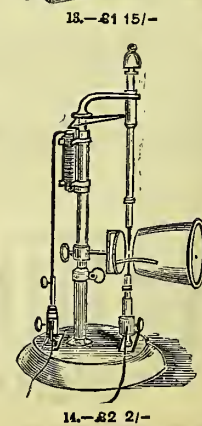
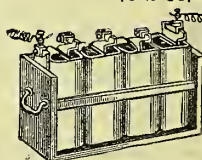
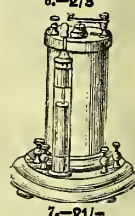
**APPARATUS SECURELY PACKED FOR THE
COLONIES AND FOREIGN PARTS.**

NEW PRICE LIST OF CHEMICAL APPARATUS,
Containing 600 Illustrations, price 6d.

Complete Illustrated Catalogue of Scientific Apparatus,
nearly 1,000 Woodcuts, price 2/6.

J. ORME & CO.,

65 BARBICAN, LONDON.



THE
CHEAPEST

AND

BEST

ALMANACS

PUBLISHED
(AT THE PRICE).

SEND FOR SAMPLES

DO NOT ORDER ELSE-
WHERE BEFORE SEEING
THEM.

DAVIS' TOILET ALMANAC.

SEVENTEENTH YEAR OF
PUBLICATION.

TITLE COPYRIGHT.

An elegant Presentation Almanac—compiled expressly for Chemists—at a nominal price.

Past success has induced others to issue similar Almanacs. The TOILET—first in the Market, still stands pre-eminently THE BEST.

Davis's Domestic Bear Book.

Demy 8vo. Illustrated. Containing Almanac and Diary.
Especially suitable for Chemist's distribution, leaving space for own matter. Write for Samples.

JOHN DAVIS, Medical Printer,

Steam Works :

OLD KENT ROAD, LONDON, S.E.

IMPORTANT TO CHEMISTS AND DRUGGISTS.

THE PICTORIAL MONTHLY,

A Magazine for Localisation by Chemists and Druggists.

THE attention of CHEMISTS and DRUGGISTS is respectfully directed to the above Magazine, which is so arranged that it can be introduced into any Town or Village, called by the name of the purchaser, as *Robertson's Pictorial Monthly*, or by the name of the town, as *The Lymington Pictorial Monthly*, and be distributed by business men, with their price lists and announcements added, AS THOUGH IT WERE THEIR OWN SPECIAL PRODUCTION. Its size is crown quarto, 16 pp., with illustrations in each issue. Every number is COMPLETE IN ITSELF, and will be published on the 15th of each month. August number now ready.

METHOD OF LOCALISING THE MAGAZINE.

The Magazine will be so arranged that the 1st, 12th, 13th, and 16th pages, or any one or more of them, may be removed when the Magazine is being printed, and, if the buyer wishes it, and any Local Matter, Price Lists of Goods, &c., &c., he may wish to have inserted dropped in the place of the pages removed. The extra printing, if desired, can be executed for him by the London publisher.

BUSINESS ADVANTAGES OBTAINED BY LOCALISING THE MAGAZINE.

The advantages to any Professional man will be apparent. The fact of his being the Publisher of a Local Magazine must bring a larger number of customers regularly to his place of business, and give him a distinctive position amongst gentlemen in a similar business of the same town. By receiving local advertisements the buyer could completely cover his own outlay, and thus get his advertisement gratis. Specimen copy free on application.

CONTENTS OF THE MAGAZINE.

The Contents of the Magazine will be of the highest order. The Tales will be full of incident and interest; the Essays witty and well-written; and the Illustrations plentiful and of first-class quality. The Magazine will be sure to commend itself wherever it is introduced; and the purity of its tone will allow it to be carried without fear into any family circle.

TERMS—The Pictorial Monthly, per 100, 5s. Liberal Discount on 500 Copies and upwards Setting Local Matter, and Inserting in place of Magazine Matter, per page, 6s. 6d. SPECIAL TERMS FOR ADDING WRAPPER ON APPLICATION. Cash with Order.

Enquiries and all Communications to be addressed, and Cheques, Post-Office Orders, &c., made payable to JOSEPH STANTON, 225 Great Dover Street, London, S.E.

N.B.—To suit the requirements of gentlemen who do not desire to issue the Magazine so frequently as once a month, occasional orders for particular numbers will be accepted, provided they are sent in by the 10th of the preceding month.

ORDERS FOR EVERY DESCRIPTION OF PRINTING EXECUTED AT THE OFFICE OF THE PICTORIAL MONTHLY. Orders to be addressed to Manager, Chronicle Printing Works, 225 Great Dover Street, S.E.

Notice to the Trade.

GENUINE EAU DE COLOGNE

MANUFACTURED BY

JOHANN MARIA FARINA,
JULICH'S PLATZ No. 4,

A DESCENDANT FROM THE

Original Manufacturer of this Valuable Perfume,
IS KNOWN THROUGHOUT THE WORLD AS

No. 4.

AND SOLD BY ALL THE LEADING WHOLESALE HOUSES.

In 2 oz. Bottles.

In 4 oz. Bottles.

In 6 oz. Bottles.

In 8 oz. Bottles.

In reputed $\frac{1}{2}$ -Pint, Wickered.

In reputed Pint, Wickered.

In reputed Quart, Wickered.

In 4 oz. Bottles, Wickered.

JOHANN MARIA FARINA,
JULICH'S PLATZ No. 4,
COLOGNE-ON-THE-RHINE.

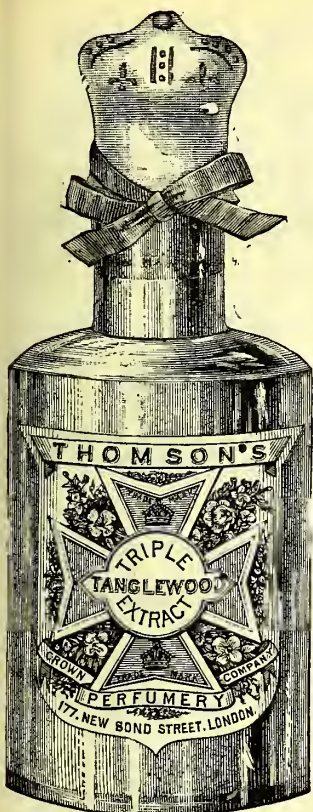
By Special Appointment to the Prince of Wales and to several Imperial and Royal Courts.

Possessor of PRIZE MEDALS and DIPLOMAS of the Exhibitions at LONDON, 1851; NEW YORK, 1853;
LONDON, 1862; OPORTO, 1865; CORDOVA (Argentine Republic), 1871; and at VIENNA, 1873; SANTIAGO (Chili), 1875;
PHILADELPHIA, 1876; CAPE TOWN (South Africa), 1877 (Gold Medal); SYDNEY, 1879; and MELBOURNE, 1880.

Sole WHOLESALE Agents for the United Kingdom and Colonies,

FICKUS, COURTENAY & CO.

ST. DUNSTAN'S BUILDINGS, GREAT TOWER STREET, LONDON.



THE CROWN PERFUMERY CO.,



177 New Bond St., London,

Beg to draw the attention of Chemists, Druggists, and Perfumery Dealers to their Fine Perfumes and Fancy Soaps, for the excellent quality of which **SEVEN PRIZE MEDALS HAVE BEEN AWARDED.**

Concentrated Essences of Great Fragrance and Strength:—

Tanglewood,
Crown Bouquet,
Mathiola,
Stephanotis,

White Rose,
Jockey Club,
Ess Bouquet,
Wood Violet,

Frangipani,
Opoponax,
Ylang Ylang,
Isle of Wight Bouquet,

16/, 20/, 28/, 48/, and 84/ per doz.

SUPPLIED IN BOND FOR EXPORT AT GREATLY REDUCED PRICES.

THE CROWN SOAPS are prepared with great care from the purest materials, delicately perfumed, and very lasting.

BROWN WINDSOR, HONEY, ALMOND AND GLYCERINE, ROSE, &c.—In Card Boxes of 3 tablets each, 8/ and 12/ per dozen boxes; also in Wood Boxes of 7 or 14 lbs., 64/, 74/, 84/, and 120/ per cwt.

PURE COAL TAR SOAP.—Each tablet enveloped in tin-foil. 27s. per gross. The well-known disinfecting properties of this Soap have caused it to be in universal demand. Its regular use, especially in warm climates, quickly allays all irritation of the Skin, whilst its agreeable odour induces a feeling of freshness and comfort not attainable by any other means.

OPALINE SOAP, FOR THE SKIN AND COMPLEXION.—Absolutely pure, delicately scented, and very emollient. 12/ per dozen boxes.

OPALINE TOOTH PASTE, the New Fragrant Dentifrice, 8/ per doz.

OPALINE FACE POWDER, 3/6 and 7/ per dozen packets; 15/ per dozen boxes.

Indents may be forwarded through any English Commission Merchant or Drug House.

ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE MANUFACTORY,

NEW FAIRFIELD WORKS, OLD BAILEY, E.C.

RIMMEL'S SANITARY PERFUMERY

GOLD AND SILVER MEDALS, HEALTH EXHIBITION, 1884.

RIMMEL'S AROMATIC OZONIZER, a fragrant powder, which, simply spread on a plate in apartments or places of public resort, evolves the refreshing and healthy emanations of the Pine and Eucalyptus, and produces a quantity of *Ozone*, the great air purifier. Dr. Hassall says: "A more effective and agreeable disinfectant has never been produced." It is in use in many Hotels, Clubs, Schools, Hospitals, and Theatres, and also on several Lines of Steamships. In 4-oz. Tins, 1/; 1-lb. Tins, 3/6; Spreading Plate, /6.

RIMMEL'S OZONIZED EAU DE COLOGNE, LAVENDER WATER, or FLORIDA WATER, sprinkled on a pad hung up in the air, destroys bad smells and noxious effluvia in sick rooms, closets, &c. Price, 2/6 and 5/ per Bottle; Pad, 1/.

RIMMEL'S AROMATIC POCKET OZONIZED CASSOLETTES, to preserve from infection, /6.

RIMMEL'S TOILET VINEGAR maintains its forty years' reputation as a most tonic and salutary lotion for the Toilet or Bath.

Price, 1/, 2/6, and 5/.

N.B.—500 detailed prospectuses, containing certificates and testimonials, sent with name and address to every purchaser of 3 dozen Aromatic Ozonizers, 1s. size.

SOLD BY ALL CHEMISTS AND DRUGGISTS. THE USUAL ALLOWANCE TO THE TRADE.

EUGENE RIMMEL, PERFUMER TO H.R.H. THE PRINCESS OF WALES, **96 STRAND, LONDON.**

LARD GUARANTEED PURE
ABSOLUTELY

ORIGINAL AND BEST BASIS FOR OINTMENTS, &c.

CLARIFIED LARD, 11d. per lb. (10d. by 28 lbs.), 84/ per cwt.

BENZOATED DO., 1/ per lb. (11d. by 28 lbs.), 94/ per cwt.

Mutton, Beef, Veal, and Deer Suet and Beef Marrow,

Clarified Trotter and Neats' Foot Oil, 1/6 lb., 12/ gall.

Every variety of **TOILET SOAP** from 56/ to 224/ per cwt.

SPECIALTIES:—

FRAGRANT GLYCERINE, MUSK, PINE, AND SANDAL WOOD SOAPS.

VIOLET POWDER, COSMETIQUES, POMADES, &c.

EWEN'S Clarified Fat Works
AND
Toilet Soap Factory,
5 HATFIELD STREET, LONDON, S.E.

BRECKNELL'S
SKIN SOAP,

A PURE AND UNSCENTED SOAP,
RECOMMENDED BY EMINENT MEDICAL MEN.

In the original Shilling Packets, 8/- per doz.

5 per cent. discount for Cash. 10 per cent. on a gross.

BRECKNELL, TURNER & SONS,
31 HAYMARKET, LONDON.

HANDBILLS AND SHOWCARDS ON APPLICATION.

SILVER MEDAL Awarded at the **INTERNATIONAL HEALTH EXHIBITION.**

SPONGES.

R. CRESSWELL & CO.,

SPONGE IMPORTERS & MERCHANTS,

32 Red Lion Square, London;

AND AT PIRÆUS AND SMYRNA.

ESTABLISHED 1850.

PRIZE MEDALS AWARDED:



**SPONGES OF EVERY KIND AND DESCRIPTION BY THE CASE, PIECE,
OR WEIGHT, SANDLESS OR IN SAND, OR ON STRINGS,
CARDS, AND BLUE CARD BOXES.**

IMPORTANT NOTICE.

The value, quality, and style of R. C. & Co.'s Sponges being so vastly superior, in all respects, to those currently offered, it is to the interest of all Buyers that it should be clearly stated that theirs are the Sponges required, and NOT IMITATIONS. All indents should, therefore, specify that R. C. & Co.'s Sponges must be sent, in order that all loss and inconvenience may be avoided, they having received just and serious complaints from correspondents abroad, whose intentions in this respect are not always carried out.

Messrs. R. C. & Co. beg further strongly to call attention to the fact that, owing to the success attained by them in the preparation of Sponges for the market—the result of 35 years' researches and experience—dealers are offering goods purporting to be the same as R. C. & Co.'s, but which are dyed with deleterious compounds, in no way comparable to theirs, AND ARE VERY CONSIDERABLY DEARER.

FULL PRICE LIST FREE ON APPLICATION.

ALL COMMUNICATIONS TO BE ADDRESSED TO LONDON OFFICES.

COATE & CO.,THE LONDON BRUSH WORKS,
AXMINSTER,
ENGLAND,

IN publishing their present Price Current, tender their best thanks for the favours received for a period of thirty-seven years,

During which time, by the patterns registered and processes patented, namely, the White Enamelled Cement, the Machinery applied, the New Machines invented, &c., they believe they have taken the lead in improving the Manufacture of Tooth Brushes more than all the other Tooth Brush makers in the world put together, whose main efforts seem to have been that of trying to imitate the style and patterns of Coate & Co., but with very imperfect success as yet.

For, as a true test of the superiority of their manufacture, Coate & Co. can say that at the present moment their customers are now supplying most of the crowned heads, princes, and nobles of Europe with Tooth Brushes made by Coate & Co.

Such being our present position in this branch of manufacture, we beg to assure our friends and customers that no efforts will be spared to hold our position and merit their continued support and approval.

We trust and think that the life-size Illustrations now issued will greatly assist our customers at the retail counter, and facilitate orders per letter at home and abroad.

The drawings of each pattern signify actual size and shape, not hardness, except the patterns G H (Goat Hair), V S (Very Soft), V H (Very Hard), Y, for Yellow or Unbleached Hair, and B H (Badger Hair). All the other patterns are made and sent out in Soft, Medium, and Hard, assorted, unless ordered to the contrary.

If best Tooth Brushes are ordered by the gross assorted, with a remark as to hardness, preferable or objectionable patterns, a better and more saleable variety can be had than if ordered by one or two dozen per No. Observe, no Sponge Brushes, Palate Brushes, Very Soft or Very Hard, would be sent unless specially ordered to be sent in such gross, and customers who order Assorted Patterns can rely on having a nice assortment sent at once; but, when ordered to pattern, more time may be required, for although Coate & Co. held in stock on January 1, 1885, nearly three thousand gross of Tooth, Hair, and Nail Brushes, made and partly made, yet the variety of Patterns, Qualities, and Hardness is so great that they cannot at all times keep up a large quantity of each Sort, Pattern, or Hardness.

THE FOLLOWING ARE A FEW OF THE PRICES OF OUR MERCHANTABLE TOOTH BRUSHES:—

	Per doz.		Per doz.
Common Cemented	2/	Cemented, Superfine, stamped with Elephant ..	5/
Cemented	2/6	Warranted Best, stamped with Royal Arms ..	5/6
" London	3/	Warranted Best Hair, stamped with Trade Mark..	6/
" Improved	3/6	Extr Best, stamped with Trade Mark and "Coate	
" Warranted	4/	& Co.," London	6/6
" Warranted Extra	4/6		

ILLUSTRATED PRICE LIST SENT FREE ON APPLICATION WITH BUSINESS CARD.

N.B.—A Large Stock of Finished TOOTH BRUSHES, HAIR BRUSHES, &c., kept ready for Merchants' Shipping Orders.

“IMPERIAL”

(REGISTERED BRAND)

SOFT SOAP

IN TINS.



1 lb. each net.

2 do.

3 do.

3½ do.

4 lb. each net.

6 do.

7 do.

And Firkins &

Half-Firkins.

May be had through all Wholesale Druggists, Oil Merchants, and Drysalers,
and (in wholesale quantities only) of the Manufacturers,

THE CHISWICK SOAP CO.,

CHISWICK, LONDON, W.

Makers of the "10% Carbolic," "P.B. Olive," "B.B.B.," "B.B.," and other Soft Soaps.

GOLD MEDAL, CALCUTTA EXHIBITION.

Also PRIZE MEDAL at the INTERNATIONAL HEALTH EXHIBITION
for SOFT SOAPS.

BOURNE, JOHNSON & LATIMER,

ESTABLISHED 1850.

SPECIAL NOTICE.

WE ALLOW A SPECIAL DISCOUNT of 2s. in the £ for Cash on large or small parcels. This is the highest discount allowed by any firm publishing a catalogue, and is a far greater concession than 5 per cent. and carriage paid.

ANY NUMBER OF ENCLOSURES will be received and packed with Goods—and we are always ready and willing to send to any part of London for odd articles, not kept in stock.

NO BOOKING FEE is charged on small parcels sent per Foster, Sutton, Globe, or any Railway Company.

LETTER ORDERS are almost invariably despatched on the same day as received.

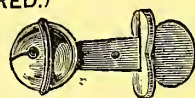
OUR NEW PRICE LIST will be issued soon, and will bear comparison with any other catalogue. In the meantime, customers who favour us with their orders may rely on having goods charged at the lowest prices.

MUSICAL BELLS—The New Teething Pad.

Black, White, and Brown Indiarubber, with Nickel-plated Bell. Very Sonorous.

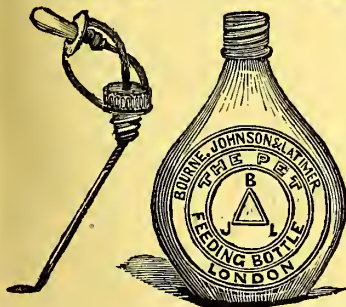
(REGISTERED.)

Twelve on a handsome Show Card, per dozen 4/6. These have had an enormous sale. Every Chemist in the country should try a sample dozen, which will be sent on receipt of Stamps or P.O. Order.



10 PER CENT. DISCOUNT FOR CASH.

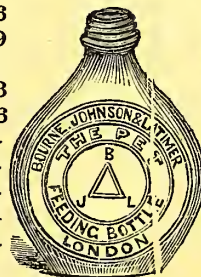
THE "PET" FEEDING BOTTLE



Nos. 17 and 22.

No.		Per doz.
6.	Green glass bent neck, white fittings ...	3/6
7.	" " black " ...	3/9
10.	" screw glass stopper, white fittings 4/-	
11.	" " black " ...	4/3
14.	White flint glass, china caps ...	7/6
17.	" screw glass stoppers ...	8/-
19.	" pure tin caps ...	8/-
20.	" gilt metal caps ...	12/-
21.	" gilt china caps ...	12/-
22.	" glass screw stoppers ...	12/-

Nos. 6, 7, 10, and 11 are also supplied in boxes containing 1 gross at specially reduced prices.



Nos. 19 and 20.

BOURNE, JOHNSON & LATIMER

(SUCCESSORS TO BOURNE & TAYLOR),

WHOLESALE AND EXPORT DRUGGISTS' SUNDRIESMEN,

34 & 35 CASTLE STREET, HOLBORN, LONDON, E.C.

J. SANGER & SONS'

NEW & REVISED PRICE CURRENT

IS NOW READY.

AND WILL BE FOUND TO BE A MOST COMPREHENSIVE LIST OF

PROPRIETARY MEDICINES, PERFUMERY,

DRUGGISTS'



SUNDRIES,

MINERAL WATERS, LOZENGES, ETC.,

AND WILL COMPARE FAVOURABLY WITH ANY OTHER LIST AS TO

PRICES CHARGED.

POST FREE ON RECEIPT OF BUSINESS CARD.

Purchasers of Druggists' Sundries, Smelling Bottles, Hair Brushes, Combs, Sponges, Thermometers, Filters, and Boxes of all descriptions should pay a visit to our Showroom before purchasing elsewhere, in order to compare our prices and quality against other houses.

AGENCIES OF ALL KINDS UNDERTAKEN ON FAVOURABLE TERMS.

J. SANGER & SONS, 489 Oxford Street, LONDON, W.

THE SPECIAL ATTENTION OF THE TRADE
IS CALLED TO

BENZINE COLLAS,

Which is acknowledged on all hands to be the most reliable Preparation for removing Grease, Oil, Tar, Wax, or Paint from every description of Wearing Apparel or Household Stuffs. It neither injures the colour or texture, nor leaves any odour or stain. It is neatly got up, and is a most saleable article. Observe the word "COLLAS" on label and cap.

1,000 Handbills, with Name and Address,

Will be printed for any Chemist who gives an order for

£1 WORTH of BENZINE COLLAS.

At the following prices, viz. :—

6d. Size	4s. per dozen, subject to Discount.
1s. Size	8s. " " "
1s. 6d. Size ..	13s. 6d. " " "

Special Quotations to Shippers and Buyers of
6 dozen of any size and upwards.

J. SANGER & SONS,
489 OXFORD ST., LONDON, W.

KEARSLEY'S WIDOW WELCH'S FEMALE PILLS.

These are universally acknowledged to be the Genuine,
and Druggists may safely recommend them.

CAUTION!

The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for **Widow Welch's Female Pills** has been prepared by them for **97 Years!** Chemists are particularly requested to remark that, as a testimony of authenticity, each bill of directions contains an Affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, and each box is wrapped in WHITE paper.

1,000 Handbills, with Name, and 2 Tin Showcards,
Supplied with all Orders for One Dozen (13) Boxes.

PRICE 27s. PER DOZEN, subject to usual Discount.
Special Quotations to Shippers and for large quantities

J. SANGER & SONS,
489 OXFORD ST., LONDON, W.



CURTAIN ROAD, LONDON, E.C.,
WHOLESALE AND EXPORT

DRUGGISTS' SUNDRIESMEN,
DRUGGISTS,
Surgical Instrument Makers, Perfumers, &c.



THE "MATER."—Screw Glass Stopper.

MANUFACTURERS OF THE

"BRISTOL," "MATER,"

"IMPERIAL," AND "TROPICAL"

FEEDING BOTTLES

1885 LIST

SENT POST FREE ON APPLICATION.



"BRISTOL."—Earthenware Cap.

Careful attention given to Export orders, and, in ordering through Merchants, it should be distinctly stated on the indents that the Goods are to be obtained from

THOMPSON, MILLARD & CO., LIM.

AYRTON & SAUNDERS,

DESIGNERS AND MANUFACTURERS OF

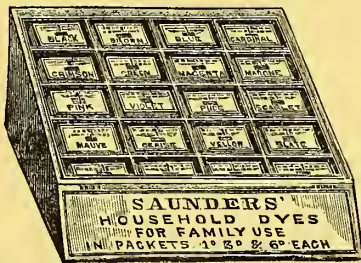
"ARTISTIC SPECIALITIES"

IN

DRUGGISTS' SUNDRIES.



Specimen of Card.



Specimen of Mahogany Show Case, given with 4 gross 1d. Dyes and 1 gross 3d., or equivalent for 5s. nett.

Our Goods will be found well worth the attention of the Trade, being of good and uniform quality, elaborately finished, and eminently suitable for a high-class business.

SOLD BY CHEMISTS AND DRUGGISTS ONLY.

SAUNDERS' HOUSEHOLD DYES,

SIMPLE, BRILLIANT, AND ECONOMICAL.

Every colour having been practically tested during preparation. Colours as under supplied:—

BLACK	BUTTERCUP	FAWN	ORANGE	SCARLET
BROWN—	CANARY	GOLDEN	PEACH	SLATE
LIGHT	CARDINAL	YELLOW	PINK	STRAW
DARK	CHARTREUSE	GREEN	PLUM	SULTAN RED
GOLDEN	CLARET	GREY	PONGEAU	TABAC
BLUE—	CORAL	LAVENDER	POPPY	TERRA COTTA
LIGHT	CREAM	LILAC	PUCE	TUSCAN
DARK	CRUISE	MAGENTA	PURPLE	VIOLET
NAVY	CRIMSON	MAUVE	ROSE	YELLOW
ELECTRIC	CRUSHED	MARONE	RUBY	
BRONZE	STRAWBERRY	MOSS	SALMON	

Prices of Packed Dyes, 1d., 7s.; 2d., 14s.; 3d., 21s.; 6d., 48s. per gross.

SPECIAL QUOTATIONS given for ANILINE DYES in BULK.

SAUNDERS' GENUINE BLACK DYE

Supplies a long-felt want.

With it any article can be dyed a deep Jet Black, no matter what the previous colour has been. In 2d. Packets, 16s. gross; and 4d. and 6d. Boxes 3s. and 48s. gross. The 2d. are mounted on 3-dozen Cards, the 4d. and 6d. in Labelled Outers.



3/9 doz., 40/ per gross.

CURL & TOILET PAPERS,

Plain and Medicated, Wrapped or in Hanging Cartons.

CURL PAPERS in Wrappers, retail 4d. each; per dozen, 2s. 8d.

" " as sketch, very saleable, retail 6d. each; per dozen, 3s. 9d.; per gross, 40s. nett.

" " MONROE'S, in HANGING CARTONS, Extra Tough Paper, retail 6d. each; per dozen, 4s.

ANTISEPTIC TOILET PAPER, Monroe's Perfumed, in HANGING CARTONS, very tough, but dissolves readily and does not clog the pipes; per dozen, 8s.



MEDICATED COTTON WOOL,

Best quality. Handsomely got up. Expressly for the Retail Trade.

Bronze and Gold Wrappers on Boxes. 6d. Boxes 3s. dozen; 1s. Boxes 6s. dozen.

ABSORBENT WOOL, same size and style, 3s. 6d. and 7s. dozen.



BLUE AND WHITE CHINA PAP BOATS.

Best Quality Ware. A most saleable Sixpenny line, and one of the cheapest in the trade. Price 4s. per dozen.

SAMPLES OF ANY OF THE ABOVE SUBMITTED ON APPLICATION.

We also offer special facilities to Chemists desirous of introducing articles bearing their own name and printed matter, and shall be glad to furnish detailed information and quotations to any of our correspondents.

All Goods delivered Free to any London, Liverpool, or Manchester House for enclosure.
Special Quotations given to Wholesale Buyers.



AYRTON & SAUNDERS

149 DUKE STREET, LIVERPOOL.

NEWBERY'S 1885 NET CATALOGUE

NOW IN CIRCULATION.

DEPOT FOR—

AYER'S American Medicine.
GRIMAULT & CO.'S
Specialities.
GOURAUD'S Oriental Cream.
GUILD'S (Dr) Green Mountain Asthma Cure.
HIMROD'S Cure for Asthma.
INGLUVIN.
JAYNE'S (Dr.) American Medicines.
KIDDER'S American Pastilles.
SWAYNE'S All-healing Ointment.
WARNER & CO.'S Sugar-coated Pills, Parvules, Ingluvin, Quinamine, &c.
And many other British and Foreign Proprietary Goods.

SPECIAL DEPOT FOR

CUTICURA REMEDIES,

Now being extensively
advertised to the general
public.

*Chemists should be prepared to execute
orders for
"CUTICURA" MEDICINES.*

For the Season.

FLESH GLOVES,
SPONGES,
SMELLING SALTS, 6d.,
THERMOMETERS,
SPONGE BAGS,
INSECT POWDER
TINS,
COMBS AND HAIR
BRUSHES,
&c. &c.

F. NEWBERY & SONS (ESTABLISHED A.D. 1746). 1 King Edward St., Newgate St., **LONDON.**

BETTS & CO., LIMITED

(ESTABLISHED IN 1840),

SOLE MAKERS IN GREAT BRITAIN OF

METALLIC CAPSULES,

AND PATENTEES OF THE

COLOURED SIDE MARK, LABEL, AND OTHER SPECIALITY CAPSULES

(For the Prevention of Fraud and Refilling of Old Labelled Bottles), as supplied to Bass & Co., and the leading
Brewers and Bottlers of Wines and Spirits throughout Europe.

PLAIN ORDINARY CAPSULES,

For Small Phials, 2s. 6d. and upwards per 1,000, according to size, style, design, and quantity.

SPECIAL CONTRACTS FOR CONTINUOUS DEALING.

Manufacturers of Pure English-made Bottling and Package Tinfoil, from 1s. per lb. and upwards; Mixed Foil (Foreign Quality), from 6d. per lb. (according to gauge); Patent Barrel Packages and Snuff Canisters, &c.

MANUFACTORIES:—LONDON: Chief Office and Factories, Wharf Road, City Road, E.C.; and Holloway and Batavia Mills, Holloway, N.W.—BIRMINGHAM: Moor Green Fields.—PARIS: Office, 4 Rue Mogador, Chaussée d'Antin.—BORDEAUX: Office, 3 Quai de Chartrons; Factory, Monrépos, Floirac.

PATENTEES OF HYDRAULIC & MECHANICAL PRESSURE CAPSULING MACHINES,

ESPECIALLY ADAPTED FOR CHEMISTS' COUNTERS.

Largely in use by the Trade, and efficiency guaranteed for all sizes of Bottles, at Royalties from 5s. to £2 2s. per annum.

Silver Medal, Paris, 1878.



TRADE



A.D. 1715.

MARK



Philadelphia, 1876.

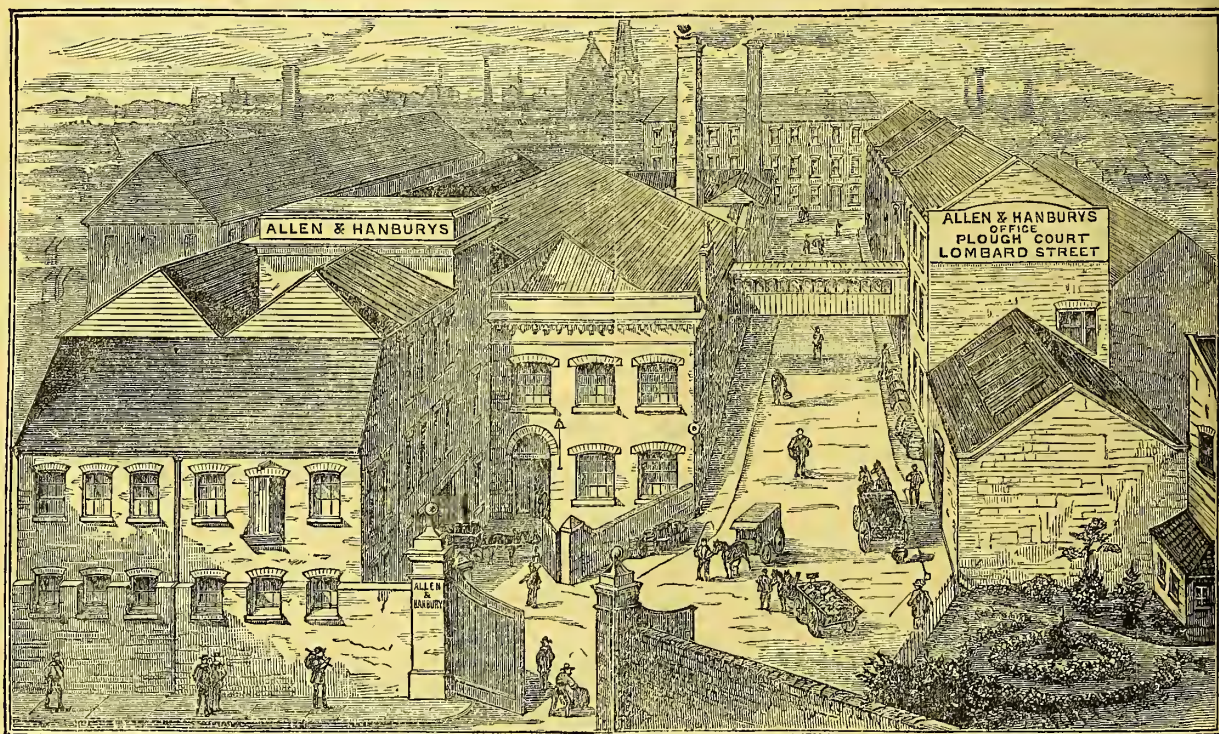
ALLEN & HANBURY'S,

WHOLESALE AND EXPORT

DRUGGISTS,

MANUFACTURING, PHARMACEUTICAL & ANALYTICAL CHEMISTS

SPECIAL MANUFACTURERS OF COD-LIVER OIL, MALT EXTRACT,
MEDICATED AND OTHER JUJUBES AND PASTILLES, ETC.



WORKS: BETHNAL GREEN, E.

Price List of Drugs, Chemicals, Pharmaceutical Preparations, and Specialties, free
on application.

OFFICES: PLOUGH COURT, LOMBARD STREET, LONDON,

And 7 VERE STREET, CAVENDISH SQUARE, W.

Works: Bethnal Green, London; and Longva, Norway.

INDEX TO ADVERTISEMENTS.

SCALE OF CHARGES FOR ADVERTISEMENTS.

All Advertisements intended for insertion in the current Month must be sent to the PUBLISHER OF THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C., on or before the 12th, except Employers' and Assistants' Advertisements, which can be received up to 10 A.M. on the morning previous to publication.

To secure the Series Rates, Orders must be given in advance	Page	1 INSERTION NET		4		7		13	
		In "The Chemist and Druggist" and all ordinary issues	If ordered for January or July special issues only	INSERTIONS EACH NET	INSERTIONS EACH NET	INSERTIONS EACH NET	INSERTIONS EACH NET	INSERTIONS EACH NET	INSERTIONS EACH NET
One		£7 10 0	£10 0 0	£5 0 0	£4 10 0	£4 10 0	£4 10 0	£4 10 0	£4 10 0
Half		4 2 6	5 10 0	2 15 0	2 9 6	2 9 6	2 4 0	2 4 0	2 4 0
One-third		3 0 0	4 0 0	2 0 0	1 18 0	1 18 0	1 12 0	1 12 0	1 12 0
Quarter		2 8 0	3 4 0	1 12 0	1 9 0	1 9 0	1 5 6	1 5 6	1 5 6
One-fifth		1 17 6	2 10 0	1 5 0	1 2 6	1 2 6	1 0 0	1 0 0	1 0 0
One-sixth		1 7 0	1 18 0	0 18 0	0 18 0	0 18 0	0 14 6	0 14 6	0 14 6

N.B.—An order for 13 insertions means 13 in THE CHEMIST AND DRUGGIST and 1 in THE CHEMISTS' DIARY. The same rule applies to an order for 7 insertions, or to an order for insertion until countermanded, if such order is in force in October of any year.

THE PROPRIETORS DO NOT VARY THEIR QUOTED TERMS UNDER ANY CIRCUMSTANCES.

A
AI BRAND MENTHOL CONESMenthol in variety 132
ÆSCULAP BITTER WATER CO.Text 526
AIRE AND CALDER BOTTLE CO.Bottles and Sundries 153
ALEXANDER, JAMES, & CO.Hamamelis Soap 50
ALLEN & HANBURYManufacturing Pharmacists, Schiefelin's Pills 38, 138
ANTOINET FILLSInk 162
APOLLINARIS CO.Humboldt Janos Water, Friedrichshall Water 97
APOLLINARIS WATER.Highest Award 86
ARUNDEL & MARSHALLFolding Card Boxes 167
ASHWORTH BROS.Metallic Comb-brushes 50
ASSISTANTS WANTING SITUATIONS.43
ATKINSON & BARKERInfant's Preservative 144
AYRTON & SAUNDERSVarious Boxes 36

B
BAILEY, W. H., & SON.Trusses, Bandages, &c. 94
BAILLIÈRE, TINDALL & CO.Books 15
BAILY, J.A Physician's Pharmacopæia 21
BAISS BROS. & CO.Wholesale Druggists 130
BANKS & RATCLIFFEBoxes, Staves, and Cask Heads 58
BARBER, G., & CO.Crimson Marking Ink 52
BARBERConcentrated Liquid Cocaine 169
BARCLAY & SONSPatent Medicines 9
BARKER, W., & SONEngravers 164
BARNES, J. B.Soda Water and Ice 65, 72
BARNETT & POSTERMachinery, Iv., Syphons, 64
BARTON BROS.Dentifricium 54
BARRON, SQUIRE & CO.Manufacturing Pharmacists 126
BASKERVILLE PRINTING CO.Printing 24
BASTIN & CO.Wholesale Druggists 127
BATTLE, J. B.Vermil Killer 67
BAUMGARTNER & CO.Brilliantine Polishing Powder 158
BEDDARD, J.Belgravia Tooth Paste 163
BEECHAM, T.Pills 139
BENGER, B.Invalid Foods 125
BENTLEY & CO.Manna Cake 120
BENTLEY, E., & SONSOpal Glass Pots 160
BENTLEY, E., & SONSMedicine Chests, &c. 114
BERNSTEIN & VOGHTChloroform & Chemicals 114
BETHELL, THOS.Parcel Post Boxes (Patent) 10
BETTS & CO.Metallic Capsules 37
BEWLEY & DRAPERDiabetic Ink 96
BIEBER, J. D.Santonine, Druggist, Hamburg 106
BIGG, THOMASSheep Dip 87
BIGGESTONWood Violet 173
BIRKBECK BANKBank and Building Society 77
BOEHL, GUS.Soap, Perfumery, and Menthol Charms 55, 165
BOLE HALL MILLSurgical Bandages 163
BOND'S DAUGHTERCrystal Palace Marking Ink 97
BOSTON, H. G., & CO."Household Relish" 163
BOURNE, JOHNSON & LATIMERDruggists' Sundries 93
BOWDEN, F. H.Henry's Indian Remedies 136
BOWERS BROS.Chemists' Printers 24
BOWLING & COVERLEYShop Fitters 92
BOX THE PATENTBox Co., LimitedBoxes 10
BRACHERMixing Machines 77
BRADLEY & BOURDASPlate Powder 157
BRADLEY, THOMASWaterproof Trusses (Improved) 94
BRAND & CO.Invalids' Foods 79
BRAMWELL, JAS.Gastric Mixture 164
BRAMWELL & SONEpsom Salts 162
BRATBY & HINCHLiffeSoda Water Plant 71
BRECKNELL, TURNER & SONSSkin Soap 29
BREFFITS, E., & CO. (LIMITED)Bottles and Sundries 153
BRETT, F. J.Transfer Agent 42
BREWERS' EXHIBITION (A. DALE, Secretary)Announcement 58
BRITISH SYPHON CO.Syphons, Gasogenes 64
BRITISH COLLEGE OF HEALTHMorison's Pills 138
BRISTOL & WEST OF ENGLAND SUPPLYHomoeopathic Medicines 143
BROOKS, PEEL & CO.Collapsible Tubes, Sprinkler Stoppers 6
BROOKS, T.Phosphoric Elixir and Formulæ 43
BUCK, F.Lessons in Dentistry 22
BULFORD, L., & CO.Pepsine 135
BURGESS, E.Lion Ointment and Pills 143
BURGESS, WILLOWS & FRANCISWholesale Druggists 131
BURGOYNE, BURBIDGES & CO.Peptoline, Fluid Extracts 121

BURROUGH, J.Spirit, Pure and Methylated 156
BURROUGHS, WELLCOME & CO.Credit to whom Credit is due 95
BUSH, W., & CO.Marigoldine, Chemicals 83
BUSH, W. J., & CO.Essential Oils, Soluble Essences, French Cream 73
BUSINESS FOR DISPOSAL43
BUTLER, MCCULLOCH & CO.Herbalists, Leeches, Waters 122
BYGRAVE, J. & W.Shop Fitter 92

C
CADBURY BROS.Cocoa Essence 19
CAMPBELL & CO.Ceylon Chemists 163
CANTRELL & COCHRANEGinger Ale, Aërated Waters 74
CENTRAL SCHOOL OF CHEMISTRY AND PHARMACYSchool 23
CENTRETON, J.Enemas 142
CETTI, E.Scientific Apparatus 22
CHAVE & JACKSONCelandine 13
CHEMISTS' AERATED WATERS ASSOCIATIONAërated Waters 75
CHESEBROUGH MANUFACTURING CO.Vaseline and Preparations 2
CHEVALIER & CO.Medicine Perles (Capsules) Text 526
CHISWICK SOAP CO.Soft Soap 32
CHRISTY, T., & CO.Menthol Cones, Specialities 133
CHUBB, J. C., & CO.Sedlitz, Violet, Fullers' Earth Powders 52
CHURCHILL, HENRYPaint Remover, Disinfectant 52
CLARKE, BLEASDALE & CO.Tikheel 133
CLARKE, JOHN T.Indiarubber Stamps and Marking Ink 165
CLARKE, S.Nursery Lamp Food Warmers 161
CLAY, DODD & CO.Wholesale Druggists, Liverpool 150
CLEMENTS, S. G.Annatto, Drug Merchants 52
COATE & CO.Tooth Brushes 31
COCKING & CO.Japan Agents, Peppermint Oil, Menthol 107
COCKING, J.Pill Machines 141
COLE, R.Ossidine, Horse Medicine 91
COLLINGHAMDrug Presses 157
COLMAN, THOS.Limnack, 1889 97
COLWELL, H. M.Trusses 150
CONDON, R.Flesh Brushes 168
CONDY & MITCHELL12
COOPER, W., & NEPHEWSSheep Dip 87
COOPER, J.Lord 44
CORBYN, STACEY & CO.Manufacturing Pharmacists, New Drugs and Preparations 1, 98
COX, A., & CO.Wholesale DruggistsPills 1
CRABEN, M. A., & SONConfectionery, Lozenges 143
CRAWSHAW, E., & CO.Crystal Dyes 168
CRESSWELL & CO.Sponges 30
CRITCHLEY, T.Starch Gloss 164
CROSSLEY BROS.Otto "Gas Engines" 69
CROWN PERFUMERY CO.Perfumery and Soap 29
CROWTHER, GEORGE J., & CO.Iron Liquor, and Nitrate, &c. 114
CURTIS & SONShop Fitters 106

D
DALES, J. T.Kid Reviver 158
DANGERFIELD, F. S.Match Case 157
DARKE, EDWARDPure Vaccine Lymph 134
DARLING, W.Coffin's Dentifrice 50
DARTON, F., & CO.Thermometers, Electric Bells, Barometers 93
DAVENPORT, J. T.Chlorodyne 123
DAVIS, JOHN27
DAVID, P. R.Cough no More, Mack's Double Starch, Ristori Eau de Cologne, P. R. D. Cleaning Powder145
DAY, SON & HEWITTVeterinary Medicine Chests 91
DAY & RAISBECKSteel Polish 164
DEED, S., & SON.Hawthorn's Peerless Gloss 158
DE LUCA, G. V.Scented Pots and Bottles, Tuscan Olive Oil 152
DENOUEL, J.Medicinal Capsules 127
DE ST. DALMAS, A.Plasters, Francis' Bronchial Protector 146
DE VRY'S CINCHONA CO.Ext. Cinchona Liquidum 135
DINNEFORD & CO.Fluid Magnesia 127
DOBELL, DR.Books 15
DOLTON & CO.Filters 77
DR. RENNERCalf Lymph 134
DUNCAN, FLOCKHART & CO.Chloroform, Ink, &c. 111
DUNN & CO.Acetic Acid and Chemicals—Fire 114
DURRANT, GEORGE, & CO.Orange Wine and Mineral Waters 64

E
EDINBURGH CLASSES.School of Pharmacy 22
EDWARDS & SONSPatent Medicines 160
EDWARDS, E. M., & SONTea Dishes 84
EDWARDS' PATENT AERATED WATER BOTTLES (BREFFITS, LIMITED)153
EISNER & MENDELSONAmerican Herbs 103
ELIAS, R., & SONRuthin Aërated Waters 67
EMPLOYERS WANTING ASSISTANTS43
ENO'S FRUIT SALTEno's Fruit 7
EPPS, J., & CO.Homoeopathic Medicines 144
ESTES, E. B., & SONSTurned Wood Boxes 10
EVANS, LESCHER & WEBBWholesale and Export Druggists, London 128
EVANS, SONS & CO.General, 185—Saline and Hawley's Counter Adjuncts, 63—Montserrat, 60—Chemists Abroad100
EWEN, J., & SONSClarified Lard 29
EXCHANGE COLUMN47, 48

F
FARINA, J. M.“Gegenüber”—Eau de Cologne 28
FARINA, J. M., No. 4Dentifrice Spoon 54
FAVARGER, H.Soda Water Machinery 72
FELTOW & SONSLime Juice 163
FELTON, GRIMWADE & CO.Druggists, Melbourne 165
FENNINGS, A.Children's Powders 19
FERGUSON, J.Dentifrice Spoon 54
FIELD, C. W.Capicine, &c., and Fruit Essences 15
FINCH, RICKMAN & CO.Mustard 84
FINK & CO.Glycerine, Guns, &c. 162
FIRMAN, H. B. (BARBERS' PASTE)Phosphor Paste 87
FITCH & NOTTINGHAMLeeches 60
FLETCHER, FLETCHER & STEVENSONPharmaceutical Chemicals and Liquors for Syrups3
FOLLOWS & BATEDruggists' Machinery, all kinds 159
FORD & SHAPLANDPrinting 24
FOUGERA, E., & CO.New York Agency 103
FOULKES, W. J.Cement, Toilet Powder 165
FRATELLI DE PASQUALE & CO.Ess. Oils 72
FRASER & CO. (LTD.)Sulphur 142
FREEMAN, R.Chlorodyne 135
FRIEDRICHSHALLAperient Mineral Water 97
FRY, J. S., & SONSMalted Cocoa and Cocoa Extract 82

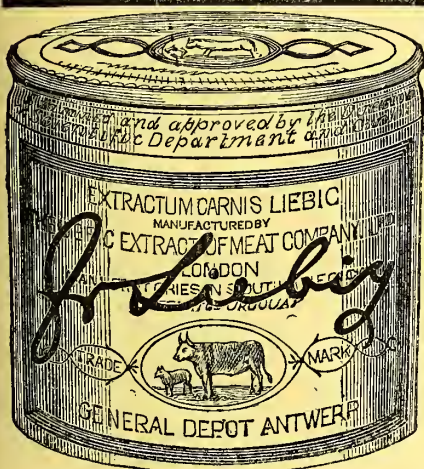
G
GALZY, E.Insecticide 162
GARBETT, RICHARDStumpson's Patent Fumigator 90
GASKELL, DEACON & CO.Bicarbonate of Soda 115
GAUNT & JANVIERGolden Scale Peppine 109
GELDARTGalactogogue 126
GEORGE & WELCHDandelion Coffee, &c. 83
GERAUT, E., & CO.Seltzogenes, Syphons, Soda-water Plant, &c. 69
GIBSON, R.Golden Scale Peppine 109
GILBERT, W.Homoeopathic Pills and Tinctures 163
GILLOTT, J.Pens 44
GOODALL, BACKHOUSE & CO.Yorkshire Relish, Caution 79, 83
GOULD, E., & SONHomoeopathic Medicines and Sundries 143
GRAESSERCarbolic Acid 114
GREEN, F., & CO.Cattle, &c., Spices, Drug Grinders, Crushed Linseed88, 89
GREENISH, T.Special Pharmaceutical 118
GRIFFITH, FARRAN & CO.Pettit's & Blackwood's Diaries 14
GRINDLEY & CO.Petroleum Jelly 162
GUERET FRERESSyphons, Seltzogenes, Soda Water Plant 68
GUY'S HOSPITAL22

H
HAMPSON, R.Sugar-coated Pills 142
HARDEN & CO.Bethsan Toothache Cure 51
HARKER, STAGG & MOSSManufacturing Pharmacists 127
HARRIS, P., & CO.Lozenges, Sugar, &c. 92
HARRISON, W. B.Ice, Mineral Waters 58
HARROPLinen Glaze 157
HARSTON, A., & CO.Ginger Ale 77
HARVEY & CO.Methylated Spirit 156
HASSALL & CO.Phospho-Citric Acid 60, 61, 62
HASSALL, T.Boy Salt 164
HAUTHAWAY'SPeerless Gloss 158
HAY, W.Soluble Ess. Lemons, Ess. Ginger, 76
Ginger Champagne78
HAYMAN (Nenth)Balsam of Horehound 146
HAYWOOD, J. S.Surgic's Apparatus 146
HAYWARD TYLER & CO.Steam Engine 67
HEARN, RIDDELL & CO.Feeding and other Bottles 152

HEATHFIELD, FRANCIS	Liq. Opt. Sed. 137	M	MACFARLANE, J. F., & CO.	Morphia, Chloroform, &c. 111	SALTER, MRS.	Home and Residence 36
HEARON, SQUIRE	Manufacturing Pharmacists 137		MACTAVISH, L. E.	Foreign Crystals 107	SANTAS CO. (LIM.)	Disinfectant, TEXT 526
HENRY	Magnesia 137		MAIGNEN, P. A.	Filters 86	SAINSBURY, S.	Lavender Water 106
HEWLETT, C. J., & SON	Liq. Santal. Flav., &c., Mist. Peppin, Co. 120		MANCHESTER SCHOOL	School of Pharmacy 16	ST. JACOB'S OIL	St. Jacob's Oil, Liniment 106
HILL	Tutorial Classes 15		MANSON & SCHRAMM	Elastic Gum Surgical Instruments 163	STANFORD & SON	Vermil Killer 37
HOCKIN, WILSON & CO.	Menthol Cones 138		MARTIN, J. W.	Rosalum Dentifrice 54	RANGER, J., & SON	Patent Medicines, Sponges 34
HOFFNUNG, S., & CO.	Druggists, Sydney and Brisbane 104		MARTINDALE, W.	Nitroglycerine Tablets 5	SAVORY & MOORE	The Lamelle of the Pharmacopoeia, Pancreatic Emulsion, Peptonised Milk, &c. 23, 81
HOLDSWORTH, THOS. W.	Wholesale Vintner 42		MATTHEWS	Mechanical Dentistry 41	SCHAEFFELIN	Soluble Pills 138
HOLLOWAY, PROFESSOR	Pills and Ointment 98		MAYER & HENCKEL	Butter Colour, Renmet 162	SCHWEPPE'S MINERAL WATERS	
HOLT, ALFRED, & CO.	Drugs, Chemicals, and General Produce 165		MIDDLESEX HOSPITAL MEDICAL SCHOOL	15	SCOTT, A. & R.	Ginger Ale, &c., TEXT 526
HOOPER & CO.	Sparkling Seltzer 1		MILLS, R. M., & CO.	Bourne Atrated Waters 74	SCOTT, J., & CO.	Middleton Fair Flower 106
HOP BITTERS	Caution and Guarantee 107		MISCELLANEOUS ADVERTISEMENTS		SCOTT, W. A.	Surgical Instruments, &c. 146
HORMUSJEE, RUTTONJEE & CO.	Bombay, Chemists 163		MOORE, A. F., & H.	Sponge, Twine, Chamols 164	SEABURY & JOHNSON	Plasters and Surgical Trusses 171
HORN & SON	Patent and Trade Mark Agents 164		MORGAN CRUCIBLE CO.	Crucibles, Porous Pots, &c. 164, 169	SEELYE	Hard Rubber Trusses 110
HORSFORD'S ACID PHOSPHATES			MORRIS, S.	Stomach Drops 144	SELF-OPENING TIN BOX CO.	Tin Boxes 42
HOSKIN, W.	Iceing and Kait Sugar 81		MORRIS & CALLARD	Acetic Acid, Naphtha, &c. 114	SHARLAND & CO.	Foreign Chemists 162
HOVENDEN, SONS	Lloyd's Eucases 57		MORRISON'S PILLS		SHIRREFFS & CO.	Foreign Chemists 162
HOWARDS & SONS	Quinine and Pharmaceutical Chemicals 93		MORRISON, R., & CO.	Drugs, Oil, & Chemicals 125	SILICATED CARBON FILTER CO.	Filters 165, 167
HOWELL'S	Golden Herb Pills 124		MOTTERHEAD & CO.	Benger's Foods 125	SILVERLOCK, H.	Annals, 1886 24
HOWLETT, S.	Shop Fitter 92		MULLEN MANUFACTURING CO.	Mullehyne Patent Medicine 133	SIMCOCK, T. H.	Cod Liver Oil 131
HYNAM, J.	Fallers' Earth 164		MUMFORD, G. S.	Linseed, Starch, Fuller's Earth, TEXT 526	SMITH, T. J.	Mineral Water Makers' Manual 114
I			MUNDAY, J.	"Munday's Iridine" and "Injection Day" 8, 124	SMITH, T. & H., & CO.	Morphia, Chloroform, &c. 114
IDRIS & CO.	Pure Mineral Waters 70		MUNSON & CO.	Folding Paper Boxes 52	SMITH, W. F.	Antibion Pills 138
INDIA, G. GROWERS' ASSOCIATION	Tea 84		MURPHY, J.	Marking Ink 52	SNEATH, T. D.	Carpet Renewer 165
INGRAM & ROYLE	Natural Mineral Waters 170		MURRAY, SIR JAS.	Fluid Magnesia, Fluid Camphor 124	SOUTHALL BROTHERS & BARCLAY	Normandy English Honey, Aquaria Sea Salt 96
INGRAM & SON	Enemies 14		MURRAY, JOHN	Kirke's Physiology 15	SOUTHERN LONDON SCHOOL OF PHARMACY	(W. Baxter, Secretary) School 18
J			NEWBERRY, F., & SONS	Sugar-coated Pills, 37	SPONGE & SON	Pig Powders 90
JACKSON, ALFRED H., & CO.	Acetic Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	SPRATTS PATENT	Dog Biscuits & Medicines 90
JACKSON, JOHN, & CO.	Peppermint, Lavender Oil Steam Distillers 113		NEWBURY, F., & SONS	Sugar-coated Pills, 37	STANLEY & SONS	Foods, Malt Extract 5
JACKSON, M., & CO. (ORME & CO.)	Scientific Apparatus 26		NEWBURY, F., & SONS	Sugar-coated Pills, 37	STANLEY, JOSIEPH	Wholesale Drug Dealers, Paints, Colours, Varnishes 138
JAMES & CO.	Hair Preparation 44		NEWBURY, F., & SONS	Sugar-coated Pills, 37	STEDMAN, J. H.	Teething and Sedlitz Powders 142
JAMES & CO.	Cure for Sickness 124		NEWBURY, F., & SONS	Sugar-coated Pills, 37	STEVENS, P. A.	White Guttae 103
JAMES, K.	Sore Throat Cure 164		NEWBURY, F., & SONS	Sugar-coated Pills, 37	STEWART, J. H.	Chlorine Water 103
JAMES, LIEUT.	Horse Blister 91		NEWBURY, F., & SONS	Sugar-coated Pills, 37	STOCKER'S FEEDING BOTTLES (BREF-FITS, LIMITED)	153
JAMES, R. J.	Horse Blister 91		NEWBURY, F., & SONS	Sugar-coated Pills, 37	STURUP & CO.	Agencies, Venezuela, & Chocolate 165
JENSEN, DR. CARL L.	Peptones and Crystal Peptone 108		NEWBURY, F., & SONS	Sugar-coated Pills, 37	SUTHERS, W. M.	Chemical Composition Essence 165
JENSEN, J., & CO.	Cod Liver Oil 131		NEWBURY, F., & SONS	Sugar-coated Pills, 37	SUTTON, O., & CO.	Tooth Blocks (Dentifrice) 55
JEWELL & BROWN	Tooth Paste 34, Atrated Waters 74		NEWBURY, F., & SONS	Sugar-coated Pills, 37	SYMES & CO.	Bismuth, Menthol, Oil, Lavand. 165
J. J.	Teeth, Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	SYMES & CO. (Sims)	Musk and Agencies 165
J. J.	Teeth, Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	SYMMONS & CO.	Cigars 164
J. J.	Teeth, Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	SYMINGTON, THOS., & CO.	Coffee Essences 4
J. J.	Teeth, Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	T	
J. J.	Teeth, Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	TALBOT & CO.	Mineral and Atrated Waters 75
J. J.	Teeth, Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	TANNER & CO.	Cocaine and Salts 117
J. J.	Teeth, Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	TAYLOR, E.	Plasters 152
J. J.	Teeth, Acid and Sugar of Lead 117		NEWBURY, F., & SONS	Sugar-coated Pills, 37	TAYLOR, T. & F. J.	Atrated Waters 67

LIEBIG COMPANY'S EXTRACT OF MEAT

INVALUABLE AND
EFFICIENT TONIC FOR
INVALIDS.



*Finest Meat-flavouring Ingredient for
Soups, Made Dishes, Sauces, &c.*



**N.B.—Genuine ONLY with facsimile of
Baron Liebig's Signature, in Blue
Ink, across Label.**

CAUTION.—In consequence of certain dealers making use of Baron Liebig's photograph, title, &c., Baron H. von Liebig finds it necessary to caution the public that the **LIEBIG COMPANY'S** Extract of Meat is the only brand ever guaranteed as genuine and of the finest flavour either by himself or the late Baron Justus von Liebig. Purchasers must insist upon having the **LIEBIG COMPANY'S** Extract of Meat.

SUGAR-COATED PILLS AND GRANULES,

In GLOBE-STOPPERED PATENT VASES for the DISPENSING COUNTER, &c.

F. NEWBERY & SONS have pleasure in calling the special attention of the Trade generally to this attractive and elegant series of

COUNTER SHOW VASES.

The Vases are fitted with hand-painted, gold-bordered Labels, of which the following are usually in stock. It is to be noted that the purchaser should, when ordering, state explicitly the **FORMULA** and **VASE-LABEL** required, as for example—"Three Vases, No. 120," labelled "Aperient," "Liver," and "Compound Podophyllin" Pills. Soluble Sugar-coated:—

Antibilious Pills	Compound Podophyllin Pills	Nerve and Tonic Pills
Aperient Pills	" Steel Pills	Neuralgic Pills
Army and Navy Pills	Cough Pills	Pil. Cathart. Comp.
Aromatic Cachous for the Breath	Digestive Pills,	" Rhei Co.
*Cathartic and Liver Pills	Dinner Pills	Podophyllin Granules
Compound Colocynth Pills	Female Pills	Purifying Granules
" Phosphorus Pills,	Liver Pills	Tonic Pills
" and Quinine Pills		

* Particular attention is invited to Pil. Cathartic and Liver, No. 120, which has been very generally approved by the Trade and the Public wherever introduced.

"**PIL. CATHARTIC AND LIVER,**" No. 120 (Warner & Co.).

GENTLEMEN,—While at the International Medical Congress, I received from your stall, in South Kensington, a small bottle marked "**WARNER'S PIL. CATH. CO.**" These I have used with satisfactory results, and I wish to give a further trial in the Hospital of them as a substitute for Castor Oil after childbirth. Be kind enough to send a further supply of these Pills. Your early attention will oblige,
Messrs. NEWBERY & SONS.

Yours truly, HUGH MILLER, M.D.

Complete detailed Price List of Pharmacopœia Pills (Sugar-coated) by W. R. WARNER & CO. forwarded on application to any part of the world by

FRANCIS NEWBERY & SONS,
1 KING EDWARD ST., NEWGATE ST., LONDON, E.C.

ESTABLISHED A.D. 1746.

Prices are published in full in NEWBERY'S ANNUAL CATALOGUES, to which attention is directed.



CHEMISTS' TRANSFERS.**MESSRS. ORRIDGE AND CO., CHEMISTS' TRANSFER AGENTS,**

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

Immediate attention given to Foreign Commissions.

The Business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade.

VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment.

PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

Particulars of any of the following will be sent free on application :—

1.—LONDON, W.—First-class Retail and Dispensing Business for disposal; gross returns over £1,300 yearly; net profit about £450; well fitted shop and good stock; very convenient house; price £1,200.

2.—LONDON, N.—Very old-established, good-class Family Retail and Dispensing; returns average over £725; profits above the average; convenient house; price £600.

3.—LONDON, N.W.—Good-class Retail and Dispensing; situated in good locality; returns £650; large and convenient house; price £640.

4.—LONDON SUBURB, S.E.—Attractive locality; good-class business; returns average £650; all full prices; good introduction given; price about £600.

5.—Messrs. O. & Co. have a large number of small businesses in London and suburbs, requiring the investment of £100, £150, £200, £250, and upwards; full particulars on application.

6.—PROVINCIAL WHOLESALE and Retail for disposal; situated within easy distance of London; returns about £7,000; sum required under £4,000. Particulars on application, accompanied by business card.

7.—STAFFORDSHIRE.—Unopposed Country Business; returns at present £600, with good profits; large and convenient house; good garden, greenhouse, vinery, stables, with every convenience; price £600, or valuation.

8.—SOMERSET.—Retail and Dispensing, with stationery attached; returns £1,350, with good profits; large and convenient house; price £1,100.

9.—GLOUCESTERSHIRE.—Good-class unopposed Business; returns between £600 and £700, with good profits; large and convenient house and good garden; price £600.

10.—SOMERSET.—Large market town; good-class Dispensing and Retail; returns about £1,000; handsomely fitted shop and good stock; full particulars on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application.

Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION.**ORRIDGE & CO., 32 Ludgate Hill, E.C.****MIDLAND COUNTIES TRANSFER AGENCY.****F. J. BRETT,****Trade Valuer and Auctioneer, Leicester.**

BRADFORD.—Light, Profitable First-class Retail; returns £800; price £750, or small goodwill and valuation.

GLAMORGAN.—Death vacancy; returns now £6 week, capable of being doubled; price £200; easy terms.

MIDDLESEX.—Light Retail; returns £400; illness cause of sale; price £300.

DEVON.—Light Retail; returns £550; good introduction given, as vendor will reside near; this is capable of very considerable increase; price £450, half can remain.

YORKS (Seaside).—Death vacancy; Light Retail, Dispensing, and Prescribing; suit young man well; price £250.

LANCS.—Prescribing and Retail; returns £10 week, a good prescriber could double; price £250, or valuation.

LONDON, S.—Dispensing and Light Retail; returns £960; price £350.

HULL.—Retail and Prescribing; returns £370; price £175, or reasonable offer.

MON.—Good Country Retail; returning £700, energetic man could much increase; price £500, part can remain.

INDIA.—Drug and General Stores; returning £4,000 to £5,000 per annum, at good profits; there is a large and well-selected stock; price £4,250; references required.

F. J. BRETT, LEICESTER.**THOS. TOMLINSON & SON,****COMMERCIAL AGENTS AND VALUERS,****41 CORPORATION STREET, MANCHESTER.****36 YEARS' PRACTICAL EXPERIENCE.**

Inventories taken and Open Valuations given for Stocktaking or Transfer.

BUSINESSES IN ALL PARTS OF THE COUNTRY.

FOR TESTIMONIALS SEE PREVIOUS ADVERTISEMENTS.

SPECIAL.—An old-established Business in Guernsey, Channel Islands.

WAITE & BATTMAN,**TRADE VALUERS,****CHEMISTS' & MEDICAL TRANSFER AGENTS****63 Finsbury Pavement, London, E.C.**

Valuations conducted throughout the United Kingdom for Stock-taking, Probate, and Insurance.

PARTICULARS FREE ON APPLICATION.

**BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS.
NO CHARGE TO PURCHASERS.**

Yorks.....	Returns	£350	Price	£200.
London, S.E.....	"	£800	"	£670.
" W.....	"	£350	"	£150.
" W.....	"	£1,200	"	£1,100.
" S.E.....	"	£400	"	£250.
Kent	"	£500	Price about	£250.
London, N.	"	£600 ..	{ Lease worth	£600. £300.

Several other Businesses on books for selection.

Messrs. WAITE & BATTMAN are practical Chemists, and have been intimately connected with one of the leading London wholesale houses for a number of years, so that vendors and purchasers may be assured of getting reliable trade information.

THOS. W. HOLDSWORTH, BIRMINGHAM,**Late WHOLESALE DRUGGIST,**

Having had 35 years' experience in the Wholesale and Retail Trade, begs to offer his services as **VALUER OF STOCKS, &c.**, to those who may be changing businesses.

Address, 31 STEELHOUSE LANE, BIRMINGHAM.

Advertisements of Employers Wanting Assistants, Partnerships, Sales by Auction, Shops to Let, Businesses for Disposal, Businesses Wanted, &c., for 60 words or less, 4s. 6d.; 6d. for every additional 10 words. Assistants Wanting Situations, for 12 words or less, 1s.; 6d. for every 6 words or less in addition.

TO LET.

SHOP TO LET.—An exceptional opportunity for a pushing young man who is looking out for a good location.—A handsome shop in a thickly populated neighbourhood, only vacated a week by a chemist who did a good business during the last 6 or 7 years; the cause of his giving up and other particulars can be obtained of F. Quick, Wine Merchant, 78 Gillespie Road, Highbury, N.

BUSINESSES FOR DISPOSAL.

FOR DISPOSAL, in the North, an old-established Retail and Dispensing Business (40 years), owing to ill-health. Apply M., 21 The Retreat, Sunderland.

FOR SALE.—A Chemist and Druggist's Business in one of the best thoroughfares in Birmingham; a good opportunity for a pushing young man; established 25 years; satisfactory reasons for sale; will sell at valuation. J. G., care of Messrs. Wyley & Co., Coventry.

N. WALES.—Small Branch Business for disposal; returns about £340 yearly; can easily be increased with personal attention; large and convenient house; rent moderate; price £250. Full particulars from Messrs. Orridge & Co., 32 Ludgate Hill, London.

FOR DISPOSAL, a small light Retail, Dispensing, and Prescribing Business, in a fashionable watering-place, West Coast; established several years by the present proprietor, who is retiring; convenient house, corner shop, plate-glass front, side entrance; good thoroughfare; price under £300. Apply H. A., care of Messrs. Hearon, Squire & Franois, 5 Coleman Street, London.

EMPLOYERS WANTING ASSISTANTS.

ABOUT October 6, Assistant, with good references; Churchman preferred; light work; hours 8 to 8; no Sunday duty; one seeking a permanency preferred. "Chemicus," Post Office, Dorchester.

AN EXPERIENCED ASSISTANT; indoor; qualified. Send references and particulars, with salary expected, to Morris Banks & Co., High Street, Birmingham.

A JUNIOR ASSISTANT, about 21 years of age; one accustomed to a mixed country trade; please state salary required (outdoor), with usual particulars. Spong & Son, Chemists, Biggleswade.

WANTED, a Traveller for Country Shop trade (Lancashire and Yorkshire). 49/39, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

WANTED, to proceed to Melbourne, Australia, a duly registered Chemist's Assistant, unmarried, and not above 30 years of age. Apply to John H. Atkinson, Holly Bank, Nafferton, Hull, enclosing stamped envelope.

IMMEDIATELY, an Assistant, not under 21 years of age; accustomed to a good-class Retail and Dispensing; must write a good hand; indoors, but sleeping out. Personal application to E. L. Hickey, 199 King's Road, Chelsea, S.W.

JAPAN.—Wanted, an Assistant who has passed the Minor Examination, who can speak French or German, and is also acquainted with the Metric system and conversant with foreign prescriptions. Apply, by letter only, to W., care of Messrs. Geo. Curling & Co., 30 St. Mary Axe, E.C., stating age, qualifications, and the latest engagements.

TRAVELLER wanted for a Drug, Oil, and Drysalter House; none need apply who cannot furnish satisfactory references as to character, experience, and ability. Apply X., care of Messrs. Barkas & Son, Central Exchange, Newcastle-on-Tyne, stating age and references, also state whether married or single.

ASSISTANTS WANTING SITUATIONS.

WHOLESALE.—As Junior; 3½ years in Retail. J. Day, Kimbolton, Hunts.

LOCUM TENENS; disengaged shortly. For particulars apply to E. Sharpe, Uppertorpe, Sheffield.

TO MANAGE A BRANCH; aged 29; strictly sober; good references; disengaged October 1. A. B., Mr. A. P. Preston, Abingdon, Berks.

TO MANAGE A BRANCH, with view to succession, or as temporary; strictly sober; good references. "Chemist and Druggist," care of Mr. Bond, Southgate, London, N.

M. R. S. SMITH, 76 Devonshire Street, Bridgwater, having taken charge of a business for the last 4 months, during the visit of the proprietor to America, will shortly be open to similar confidential charge.

TO MANUFACTURING CHEMISTS.—Wanted, by a Young Man, situation as Chemist. 123/21, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

WANTED, Business Occupation or Agency, in London, by a Pharmaceutical Chemist, for many years connected with, and possessing experience and interest in, several auxiliary branches of the business, including surgeons' wholesale, surgical instruments, optical and scientific instruments and apparatus, photographic chemicals and apparatus, manufacture of aerated waters; oils, paints, and colours; drysalter, and others; ample security at command; literary occupation not objected to. 123/11, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

MISCELLANEOUS.

REQUIRED, for THE CHEMIST AND DRUGGIST, an Assistant Editor, the gentleman at present occupying that position having accepted the editorship of *The Chemist and Druggist for Australasia*. A good knowledge of the drug trade, combined with literary ability, is essential. Applicants will also please state if they have acquaintance with French, German, and shorthand. The duties will not be entirely literary; the gentleman appointed will be expected to keep office hours, and to assist in any direction in promoting the prosperity of the enterprise in which he will be engaged. Applicants are also requested to state whether they will be willing to remove to Melbourne if this should seem desirable. Correspondence to Editor, THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, and envelope to be marked distinctly on the outside with an X.

FAVOURABLE OPPORTUNITY FOR MANUFACTURERS OF SULPHATE OF COPPER.—For Sale, 10 tons of Copper Scales, containing 82 per cent. Apply to Heribert Höveler, Papenburg, Germany.

TO STUDENTS.—Advertiser, reading for December Minor, wishes to share apartments with a young man similarly engaged. T. H. Price, 47 King Square, E.C.

ARTIFICIAL TEETH.—Every description of Mechanical Dentistry executed; specimen cases, from one tooth to a set; dental show-cases supplied and fitted; instruction given in model and bite taking, gold stopping, and every other information supplied; moderate terms. Stewart, Leicester & Co., Dental Manufactory, 24 Stamford Hill, London.

A GENTLEMAN from North China, and about to return there in a few weeks, would be pleased to accept a few First-class Agencies or Consignments; the gentleman is principal of an established firm of Chemists, Druggists, and Commission Agents, having branches at four different British ports. Address X., care of Messrs. George Curling & Co., 30 St. Mary Axe, London, E.C.

"HELP FOR ALL."

CHEMISTS may increase their returns, double their profits, and compete with "Stores" and "cutting prices" by "selling their own Proprieties," manufactured from recipes of known excellence. The following, abstracted from my detailed list of 300, are worth notice:—"Glycerine Cream," the perfection of toilet requisites, renders the skin as soft as velvet, removes chaps and frost-bites; delicately perfumed; no disagreeable stickiness; pays well. "Lupuline Bitters," in every respect equals Hop Bitters, more elegant appearance; 1s. lb. "Occasional Pills" (for Ladies), a physician's favourite prescription, frequently preferred to Welch's or other female Pills. "Quinine and Iron Tonic" (resembles Pepper's), will keep good for years, splendid mixture. "Rheumatic Embrocation" (Camphor and Arnica), stimulating and pain-killing, better than St. Jacob's Oil; costs 8d. per lb. "Corn Eradicator" (Iodine, &c.); this form has never been published; guaranteed a superior article, and one that will sell itself, wherever introduced. "Ringworm Specific," safe, certain, and cleanly; two dressings will cure the worst case. "Lincolnshire Relish," the most piquant and appetising sauce in creation; cheap, but good. Recipes 1s. 1d. each, three for 2s. 6d., with full instructions for making doses, uses, and all particulars, post free. All communications strictly confidential. Detailed List free.

T. BROOKS, Chemist, Louth, Lincolnshire.

BOARD AND RESIDENCE IN LONDON.

MRS. E. A. SALTER, 1 Lansdowne Place, Brunswick Square, W.C. (near British Museum); a home from home; terms moderate; well recommended.

SPECIAL "LINES" IN DRUGGISTS' SUNDRIES.

Bent Feeding Bottles, black fittings, 28/ gross.
 Superior Medical Bottles, plain or grad., in flats or ovals, 3 oz., 6/6;
 4 oz., 6/6; 6 oz., 7/6; 8 oz., 7/6; 10 oz., 10/9; 12 oz., 11/;
 16 oz., 14/6 grs.
 Superior White Flint Vials, 1 and 2 drachm, 3/; ½ oz., 3/3;
 1 oz., 3/9; 1½ oz., 4/6; 2 oz., 5/3 gross.
 Pill Boxes, 1 drachm, 4/; 2 drachm, 5 gross.
 Seidlitz Demy, 7/9 ream. White Demy, 4/ ream.
 Verified Glass Measures, 1 oz., 7/; 2 oz., 8/6; 4 oz., 11/; 10 oz., 14/;
 20 oz., 19/; 2 drachm, 8/6 dozen.
 French Counter Scales, 2 lb., 13/6; 4 lb., 16/6; 10 lb., 22/ pair.
 Superior Tread Elastic Stockings, 4/6 pair.
 Chemists' assorted Coloured Twine, 8½, 10½, 1/ per lb.
 Soft loose Copaiba Capsules, 8/ per 1,000; 1/ oval boxes do., 4/9 dz.
 Higginson's Enemas, 27/ dozen; American Enemas, 18/ dozen.
 Vaccination Shields, 2/ dozen. 1 oz. Gallipots, 4/ gross.
 Hunt's Bottle Caps, assorted, 10½ gross. Cork Pressers, 9 each.
 Good Vial Corks, 4/, 6/, 8 gross. Wax Tapers, 1/1 lb.

T. W. SIMCOCK, 17 Guildford Street, Leeds.



A FIRST-CLASS GERMAN MANUFACTORY wants to enter into business connection with wholesale houses in the Drug, &c., Trade, for the sale of its Speciality, which forms an article of sale in great demand in most of the Drug Shops, Drysalteries, as well as Apothecary Shops on the Continent. In large places Agents will be appointed.

Apply to P. G., 23, care of Messrs. HAASENSTEIN & VÖGLER, Advertising Agents, LEIPZIG (GERMANY).

**FINEST NEW CREAM SUBLIME OIL.**

HAVING Imported very largely of the above, can offer it much below market price. 40-gall. Casks, 4/6 gall.; 13 to 14 gall. Casks, 4/9 gall.; 5/ gall. in W. quarts. Sample sent for four penny stamps.

SCOTT & SON, Oil Importers, ROCHDALE.

COURT PLASTER

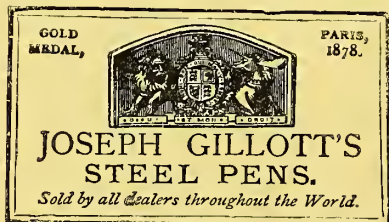
SPREAD on Silk, and suitable for sale in pennyworths, per post 2s. 6d. per yard, 16 inches broad.

**ARCHIBALD PATERSON, Chemist,
133 Govan Road, Glasgow.**

LARD,

SUITABLE FOR SHEEP OR CATTLE OINTMENT,
30s., 33s., and 36s. per cwt.

**JNO. COOPER, Lard Refiner,
CHURCHGATE, LEICESTER.**

**MECHANICAL DENTISTRY.**

The most PERFECT FIT and HIGHEST FINISH, with Punctuality, may be relied on in all Work entrusted to

**Mr. MATTHEWS,
50 BRUNSWICK ST., MANCHESTER.**

Who has had 35 Years' Experience in every branch of Dental Workmanship. The most Moderate Scale of Charges possible to ensure Good Work and Best Materials. Price List on application. A vacancy for a pupil.

THE ORIGINAL
ARNICATED
 WHITE FELT
CORN AND BUNION PLASTERS,

INVENTED AND ESTABLISHED BY

HENRY YOUNG,

A.D. 1846,

AND FAVOURABLY KNOWN ALL OVER THE GLOBE.

SUPPLIED BY ALL WHOLESALE HOUSES.

N.B.—Please see that YOUNG'S Goods are supplied, as there are many worthless imitations.

**Manufactory, 72 Clerkenwell Road, London, E.C.
(LATE OF CARTHUSIAN STREET.)**

JAMES'S TOILET SPECIALITIES.

JAMES'S HERBAL OINTMENT, for the Cure of Pimples, Black Specks, Blotches, &c., and taking away Tan Freckles, Sunburn, &c. Sold by all Chemists, 1/1½ and 2/9 per box.

JAMES'S DEPILATORY,

For the instant removal of Superfluous Hair. Sold by all Chemists, 1/- and 2/- per box.

JAMES'S HERBAL POMADE,

For Promoting the Growth of the Hair, Whiskers, Beard, Moustachios, Eyebrows, and Eyelashes. Sold by all Chemists, 1/- and 2/- per box.

These Articles are well worthy the attention of Chemists, Wholesale Houses, and others, as they are being well advertised.

JAMES & CO., 268 (late 226) Caledonian Rd., London, N.

STEWART'S**PARISIAN HAIR WASH
FOR CHILDREN.**

THE CHILDREN'S COMFORT



THE MOTHERS' FRIEND.

TRADE MARK.

Is the BEST, CHEAPEST, and most EFFECTIVE for destroying NITS and PARASITES, allaying IRRITATION, and removing all IMPURITIES from CHILDREN'S HEADS. Pleasant to use and PERFECTLY HARMLESS.

Sold in Bottles 6d. and 1s. each. Advantages.—Its large Profits to the Trade, and certain success wherever introduced.

PREPARED ONLY BY

W. H. STEWART,

ENGLISH AND FOREIGN CHEMIST,

MARKET PLACE, SHIRLAND ROAD, ST. PETER'S PARK, W.


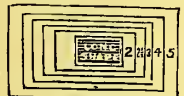




IMPORTANT TO PHYSICIANS, SURGEONS, & CHEMISTS.


ROYAL BALSAMIC

PLAISTERS

MANUFACTURED BY WILLIAM MATHER,

Are manufactured of the same kind of ingredients as those sanctioned and ordered by Dr. Andrew Smith, Director-General of Her Majesty's Army and Navy Ordnance Medical Department, for the use of the Soldiers and Marines in Scutari Hospital.

LEATHER PLAISTERS.		No.	Full Size of Leathers.	Retail Prices.	Per doz.	Royal Balsamic Plaster.	Cod Liver Oil.	Plain Plaster.	Emp. Roborans or Calefaciens	Emp. Belladonna. No. 1.	Emp. Belladonna. No. 2.
			Inches.	d.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Heart Shape	.....	1	3 x 4½	1 size.	"	0 8	0 8	0 8	0 8	1 4	1 0
	.....	2	4½ x 6	1½ "	"	1 0	1 0	1 0	1 0	2 0	1 6
	.....	3	4½ x 7½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	3½	5½ x 7½	3 "	"	2 3	2 3	2 0	2 0	4 0	3 0
	.....	4	6½ x 8½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
Long Shape	.....	1	2½ x 4	1 "	"	0 8	0 8	0 8	0 8	1 4	1 0
	.....	2	4½ x 6½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	2½	4½ x 8½	3 "	"	2 3	2 3	2 0	2 0	4 0	3 0
	.....	3	5½ x 9½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	.....	4	6½ x 11	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
Oval Shape	.....	1	4½ x 6½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	2	6½ x 8½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	.....	3	7½ x 9½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
Saddle Shape	.....	1	6½ x 12½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
	.....	2	7 x 15	8 "	"	6 8	6 8	6 0	6 0	12 0	8 0
	.....	3	8 x 16	12 "	"	8 8	8 8	8 0	8 0	15 6	12 0
Wrist	.....	1	3 x 10½	3 "	"	2 3	2 3	2 0	2 0	...	...
Knee	.....	2	4½ x 15	6 "	"	4 6	4 6	4 0	4 0	...	...

BREAST PLAISTERS.		No.	Size of Leather	Retail Prices.	Per doz.
				d.	s. d.
 Emp. Plumbi, for Ladies' Breasts .....	.....	1	Diam. 6½ in.	4 size	2 8
	.....	2	" 7½ "	6 "	4 0
	.....	1	" 6½ "	" "	4 0
	.....	2	" 7½ "	" "	6 0
BREAST PLAISTERS.		No.	Size of Leather	No. 1 Quality. Per doz.	No. 2 Quality. Per doz.
Emp. Belladonna, for Ladies' Breasts .....	.....	1	Diam. 6½ in.	5 4	4 0
	.....	2	" 7½ "	8 0	6 0
	.....	1	" 6½ "	8 0	6 0
	.....	2	" 7½ "	12 0	9 0

HOSPITAL PLAISTER, on Black Cloth, 16 in. wide, doz. yds. 8/0
" " on White " " " 8/0

Every other description of Plaster used in Pharmacy or Private Formule spread on any material, to suit any climate.

PLAISTERS, SPREAD.—Prices per Dozen Yards. 16 Inches in width.

NAME	Glazed Cloth	Unglazed Cloth	Linen	Swans-down	Mole-skin	Skins of Leather
Emp. Adhesivum Opt.	4/0	5/8	12/0	12/0	21/0	4/0
" Adhesivum	3/6	"	"	"	"	"
" Ammon. c. Hydrarg.	16/0	"	"	30/0	36/0	5/6
" Antim. Pot. Tart.	10/0	"	"	24/0	30/0	4/0
" Belladonna	18/0	20/0	27/0	27/0	36/0	5/6
" Calefaciens	11/0	12/0	15/0	15/0	24/0	4/6
" Cerat Saponis	8/0	9/0	14/0	14/0	24/0	4/6
" Dreadnought	9/0	10/0	14/0	14/0	24/0	4/6
" Elemi	9/0	10/0	14/0	14/0	24/0	4/6
" Ferri	9/0	10/0	14/0	14/0	24/0	4/6
" Galbani	14/0	"	"	24/0	30/0	4/6
" Hydrarg.	14/0	15/0	18/0	18/0	27/0	4/6
" Iodine	16/0	"	"	30/0	36/0	5/6
" Opil	18/0	20/0	27/0	27/0	36/0	5/6
" Picis Co.	11/0	12/0	15/0	15/0	24/0	4/6
" Plumbi	5/6	6/6	12/0	12/0	21/0	4/0
" Potass. Iodid.	16/0	"	"	30/0	36/0	5/6
" Resinae	5/6	6/6	12/0	12/0	21/0	4/0
" Roborans	6/0	7/0	12/0	12/0	21/0	4/0
" Saponis Alb.	5/6	6/6	12/0	12/0	21/0	4/0

MANUFACTURED BY W. MATHER,
DYER STREET, HULME, MANCHESTER, ENGLAND.

PRICE LISTS SENT ON APPLICATION.

London Wholesale and Export Agents: Messrs. MACE & HALDANE, 77 Milton Street, London, E.C.

CARRIAGE ON "SUNDRIES."

We have pleasure in stating that we first offered to pay carriage on £5 worth of "Sundries" in March, 1877. We continued to do so for nearly a year. Many of our friends who lived near London asked us to allow them 5 per cent. discount in lieu of Carriage, and many of those at a greater distance sent in so many enclosures, for which we had to debit proportion of Carriage, that we adopted the plan of allowing 5 per cent. discount on all orders of £5 worth of "Sundries."

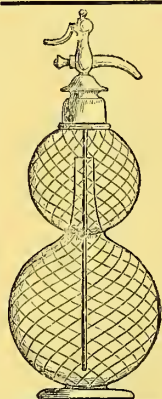
**WE ARE PREPARED TO ADOPT ANY MODIFICATION OF
THIS DISCOUNT TO SUIT ANY CUSTOMER.**

TO SMALL PARCEL CONTRACTORS.

Orders amounting to less than £1 in value, for conveyance {per Sutton & Co., Forster's Parcel Express Co., Globe Express Co., &c., will be charged with the Booking Fee of 2d. each package, charged by such carriers when we hand the parcels to them.

REDUCED PRICES.

FEVRE'S SELTZOGENES.



	2 PINT.	3 PINT.	5 PINT.	8 PINT.
Caned, each	9/0	10/8	16/2	27/3
Wired, each	8/6	10/2	15/4	25/6

"MAY-ROBERTS" WATER BATH, REGISTERED.



This Water Bath will supply a long-felt want amongst Chemists and Perfumers, where small quantities of materials have to be dealt with.

The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade, Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover. 5-pint, 5/6 each.

MAY, ROBERTS & CO.,
9 CLERKENWELL ROAD, LONDON, E.C.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the Advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

Dental and Surgical.

To Dentists.—Engine-arm and driving-stand, right-angle attachment, and 70 bits various kinds; price 5*l.*, or exchange for second-hand Archer chair, in good condition. Dens, 58 Tatham Street, Sunderland.

Drugs and Chemicals.

3 cwt. Venice turpentine; what offers? 117/4*l.*
 1/2 cwt. gum thus, 3 cwt. lamp-black, 12 cwt. copperas—cheap lot; 9 and 12 inch palette knives. Chemist, 19 Bradshawgate, Bolton.
 112 lbs. cochineal, finest silver grain, in 14-lb. parcels; what offers for whole or part? Aves, Chemist, Newark.
 Cheap.—A few barrels of Gallipoli olive oil and turpentine. Apply, Sneath, Chemist, Newark.

2 lbs. potassii iodid., 2*s.*; 4 lbs. benzoin, 6*s.*; bitumith subnit., 7*s.* 1*l.* J.C., 9 Sussex Street, Middlesborough.

What offers for acid citric crystal and acid citric pulv. (Howard's), in 28 lbs. and upwards. Younger, Brampton, Cumberland.

Potas. iodidi (Atkinson's), 10*s.* 1*l.*; Crawshaw's potas. 6*d.* dyes, 2*s.* dozen. Royle, Stockport.

Few ounces quinine, 3*s.* oz.; potass. iodid., 10*s.* 1*l.*; ol. cassia, 3*s.* 6*d.* 1*l.*; bacc. cubebe, 2*s.* 6*d.* 1*l.*; Rossetter's hair-restorer, 20*s.* doz.; potass. chlorat., 8*d.* 1*l.*; pulv. opii, 1*s.* 2*d.* oz.; ol. feniculi, 4*s.* 1*l.*; bridal bouquet bloom, 20*s.* dozen; cash, or exchange for going patents. Fowler, Chemist, Portsea.

Optical.

About 6 doz. assorted steel spectacles; 1*l.* or less accepted. 120/17.

Five doz. spectacles and folders, new, well assorted, cost 5*l.*; what offers? 123/24.

Proprietary Articles.

Two doz. Wand's cough cure, 1*s.* 1 1/2*d.*; what offers? H. Lloyd, Totnes.
 Twelve 2*s.* 9*d.*, 9 1/2*s.* 1 1/2*d.* Holt's cough specific; 2 pectorine; 1 each 1*s.* 1 1/2*d.* Vicker's anti-lactic, Miller's pectoral mixture, Brown's infant mixture—any reasonable offer;
 30 doz. 1*d.* tooth-stopping (whole), lot of broken 6*d.* sticks, weight together 12 oz., price 5*s.* Casely, Chemist, Camden Town.

Educational.

Lescher's "Elements of Pharmacy," and materia medica cabinet; cheap. J. F. Marlair, Chemist, Halstead.

Botany.—The indigenous official plants, mounted on paper 5*s.*, on cardboard 7*s.* 6*d.*; wild flowers equally cheap. Higginson, Newferry.
 Set of illegible autograph prescriptions (original), 2*s.* 6*d.*, as presented to the Pharmaceutical Society of Ireland for their examinations; 30 prescriptions (catch and difficult) given to dispense at Minor during past 12 months, 2*s.*; 50 questions asked of successful students at last Minor, 1*s.* 1*d.*; lot of cheap, almost new, books; stamp for list. Saunders, Medical Tutor, 6 Rochester Square, N.W.

Literature.

British Encyclopædia, 8 vols., half calf, 24*s.* Eley, 14 Lee Mount, Birmingham.

Dr. Sheridan Muspratt's "Chemistry," vol. 2, in good condition; what offers? 15/15.

First offer accepted for this and *Pharmaceutical Journals* from 1871; no carriage. Smith, Chemist, Sale, Manchester.

Chemist and Druggist, ten years, 1875-84, one number missing. Address, Bishop, 785 Old Kent Road.

Pharmaceutical Journal, 8 vols., 1846 to 1854; first 2 vols. *Pharmaceutical Times*, clean, strongly bound; what offers, cash or exchange? Hollick, Chemist, Lozells, Birmingham.

Chemist and Druggist, 1882-83-84, also 30 numbers for 1873, 15 numbers 1874, and 6 numbers 1875, and 53 odd numbers *Chemists' Journal*; the best offer accepted. John Lea, Harbour Street, Folkestone.

Meade's "Students' Manual," 2nd edition, 4*s.* 6*d.*; Steggall's, 7th edition, 3*s.*; "Cholera" (Dr. Bushnan), 2*s.* 6*d.*; "Syphilis" (Henry Lee), coloured plates, 6*s.*; Acton "On Prostitution," 10*s.*; "Urinary Organs," 3*s.*; book-lists, post free, 1*d.* William Turner, Chemist, Totterdown, Bristol.

Linnean Society's Journal (botany) 3 vols. complete, (zoology) 3 vols., 1 number missing; *American Journal of Pharmacy*, 1 vol. complete, 3 vols. with 8 parts missing; *Linnean Society's Transactions*, (botany) 4 parts, (zoology) 5 parts, each complete in itself; *Cassell's Popular Educator*, complete; all unbound; best offers. W. G. P., 42 Cannon Street, E.C.

Soda-water Plant.

Barnett & Foster have some second-hand soda-water machinery of their own for sale. Apply, 26 *r* Eagle Wharf Road, Hoxton, N.
 Second-hand soda-water plant—several in stock. Address, Bratby & Hinchliffe, Sandford Street, Ancoats, Manchester.

Shop Fittings.

Three 5-gal. pear-shaped carboys, in good condition; what offers? 122/26.

Glazed honey-jars, nice shape, new, very cheap and good; also covered pots. W. Turner, Chemist, Totterdown, Bristol.

Three 1-gal. carboys, with cut stoppers; lowest price 2*s.* Foster, 107 King Street, Hammersmith.

Handsome mahogany counter and wall cases, nest drawers, bottles, jars, store-bottles, &c.; bargains, to clear; list sent. 112 High Street, Woolwich.

Handsome plate-glass tablet, gold letters on black ground, "Choice Cigars," framed, 24 in. by 9 in.; 7*s.* 6*d.* F. D. Bramald, Stapleton Road, Bristol.

Pill-machine, 5-grain, tray missing, 7*s.* 6*d.*; bent plate-glass counter-case, 22 in. long, 10 in. wide, 9 in. high, lined, no shelves, 15*s.* Smith, 723 Old Kent Road, S.E.

Eighteen round show bottles; 18 round show carboys, 9 as fig. 1 Maw's list, capacity about 1 gal., 9 odd sizes; 1*l.* the lot. Mrs. Woodland, Chard.

A Bargain.—Must be sold at once, mahogany-top double counter, 18 ft., 7*l.* 10*s.*; and mahogany-fronted nest of dovetailed drawers, glass labels, 9 ft., 3*l.* 10*s.* G. E. Pybus, High Street, Stockton-on-Tees.

Three-grain pill-machine, to cut 36, nearly new; mahogany frame marble slab; exchange for 4-grain, to cut either 24 or 36; must be in good condition. Baker & Son, Chichester.

What offers? Two show-jars, height (exclusive of covers) 27 inches, enamelled glass covers, resemble No. 1 and No. 18 Maw's illustrated, labelled "Rhubarb" and "Peruvian Bark." Sneed, Chemist, Keighley.

Pair handsome upright brass counter-scales for fine work, good order, box ends, on mahogany stand with drawer, height about 18 inches, beam 10 inches, cost 30*s.*, price 10*s.*; set troy cup weights, 1/2 oz. to 8 oz., price 3*s.*; 6-gal. pear-shaped carboy, with cut stopper, price 5*s.* Kemp, Chemist, Horncastle.

A good strong shop-door, plate glass, 5 by 4 long, and 2 by 4 wide, with shutter complete, and fanlight to match; wire blind in mahogany frame, with "Teeth Carefully Extracted," in gilt letters, to fit door; the whole, in capital condition, for 2*l.* 2*s.* Foster, 107 King Street, Hammersmith.

20-ft. mahogany wall-case, with painted and grained cupboards under; 70 doz. gold-labelled shop-rounds, 6 oz. to 40 oz., assorted, 7*s.* 6*d.* doz.; 14-ft. mahogany-top counter; 7-ft. ditto, ditto; 4-ft. dispensing-screen, desk, and case; homeopathic case and contents; brass pillar scales; counter-cases; 4, 6-gal. carboys; 4 specie-jars and stands, 34 in. high; 2 window-enclosures; measures; mortars; pill-machine; funnels; scoops; dispensing-scales; 20-ft. run 156 mahogany-fronted drawers, lockers under, mahogany-fronted shelving over; 30 ointment-pots, 4 lbs.; 30 extract-pots; the above constitute the entire fittings of a chemist's shop, in first-class condition, to be sold, together or separate. E. Natal, 207 Old Street, London.

Second-hand Fittings.—Spanish mahogany counter, 19 ft., 17*l.*; 9-ft. dispensing ditto and screen, 2 ft. 5 in. high, and tablet, 10*l.*; mahogany-fronted dovetailed drug-drawers, cover-boards, grained lockers; 17 ft. 6 in., 2 nests, 74 and 14, imitation and aërated-water shelves, 8*l.* 10*s.*; 14 ft. 5 in., 2 nests, 112, 10*l.*; mahogany wall-case, sheet-glass sashes, fixed shelving, and grained cupboards under, 12 ft. 8 in. long, 8 ft. 10 in. high, 9*l.*; counter-cases, as Maw's 4—48 in. long, 27 in. high, shelves, tablet, carving, 8*l.*; plate-glass case, ebonised, 73 in. by 22 1/2, 4*l.* 10*s.*; counter-case, sloping flaps and tablet, 82 in. by 17 in., 2*l.* 10*s.*; upright Spanish mahogany counter-case, 78 in. by 33 in., 5*l.* 10*s.*; desk and case, 26 in., 2*l.*; desk with brass rail, 30 in., 35*s.*; aërated-water fittings, 29 in., 30*s.*; 2 mahogany chairs, carved backs, 30*s.* Hawke & Son, Wild Court, Great Wild Street, London.

Second-hand Glass.—Specie jars and covers—Two 23½ in. scrolls and plinths, 60s.; 2, 23 in. arms and stands, 65s.; 2, 25-in. scrolls, 60s.; 1, 31-in. scroll, glass cover, 35s.; carboys, cut stoppers—1, 16 gal., 40s.; 2, 14 gal., and stands, 37. 10s.; 3, 5 gal., 37s. 6d.; 2, 4 gal., and stands, 17s.; 3, 3 gal., 1, 2 gal., and stands, 27s. 6d.; 125 quart rounds, labelled, 90s.; 17, 2 lb. and 10, 8 oz. blue bottles, labelled, 27s. 8d.; 14, 1 gal. green carboys, stoppered, 14s.; 15 doz. rounds, washed, no labels, and 47 mazarine blue pots, ditto, one-third discount off list; 1 pair drug-scales 18s., 1 pair 15s. Hawke & Son, London.

For Sale or Exchange.—All numbers, &c., refer to Maw's illustrated list, 1882.—Bent plate-glass counter-cases, polished mahogany, 3 ft. long, 30s., as fig. A 2; also as fig. A 3, 3 ft. long, 35s.; 3 ft. 6 in. long, 40s.; 4 ft. long, 50s.; as fig. A 6, 9 ft.; fig. A 6, 3 ft. long, 60s.; 4 ft. long, 70s.; as fig. A 7, 4 ft. 6 in. long, 80s.; 5 ft. long, 90s.; 6 ft. long, with table in centre, as fig. A 18, 57. 10s.; 7 ft. ditto, ditto, 67. 10s.; fig. A 8, 6 ft. long, 67. 10s.; tooth-brush cases, fig. A 9, 35s.; fig. A 10, revolving front, 50s.; as fig. A 10, to open at back, 50s.; as fig. A 12, 30s.; as A 13, 3 ft. long, 60s.; 3 ft. 6 in. long, 70s.; as fig. A 15, 3 ft. 6 in. long, 60s.; 4 ft. long, 80s.; 2 ft. 6 in. long, 50s.; A 16, 3 ft. long, 60s.; as A 17, 3 ft. long, 70s.; 4 ft. long, 80s.; as fig. A 18, 5 ft. long, 57. 10s.; 6 ft. long, 67. 10s.; 8 ft. long, 87. 10s.; desks and cases, A 31, 60s.; 3 ft. long, 3 ft. high, 2 ft. from back to front, 70s.; 2 show-stands, A 38, 35s. each; sponge-cases, A 41, 60s.; A 42, 75s.; A 43, 95s.; dispensing-screens, 4 ft. long, A 54, 70s.; 4 ft. 6 in. long, 80s.; as A 55, 6 ft. long, 57. 10s.; 7 ft. long, 54. 10s.; 7 ft. 6 in. long, 67. 10s.; soda-water stand, A 59, 30s.; extra large size, 30s. E. Natali, 207 Old Street, London, E.C.

A first-rate plate-glass counter-case, 5 ft. long, as fig. A 1, 97. 10s.; 12-ft. wall-case, stout sheet glass, stained and polished mahogany, 107. 10s.; 11-ft. wall-case, 77. 10s.; 7-ft. 6 in. ditto, as fig. A 86, 7 ft. high, 87. 10s.; a bent plate-glass counter-case, 7 ft. 2 in. long, 22 in. wide, 16 in. high, 97. 10s., worth double, silvered-glass back, and glass ends; several centre cases and exhibition cases, 6 ft. long, 3 ft. deep, 10 ft. high; 6 ft. long, 18 in. wide, black and gold, airtight; a very elaborate dispensing-screen, glass case at each side, silvered plate-glass centre, with marble slab in front; the cases have silvered-glass backs, movable shelves, and tablets on the top, with shelves the whole length of back for dispensing-bottles, 77. 10s.; a quantity of new and second-hand drawers and wall-fixtures, very cheap; oak and mahogany-fronted counters; bottles; jars; carboys; black store-bottles, japanned caps, 15s. doz.; shelving; pilasters; cornice; lockers; a good lot of second-hand fittings, consisting of counters, drawers and shelving over; dispensing-screen; counter and desk cases; wall-case in first-class condition, ready for fixing, 507. 10s.; specie-jars, carboys, scales, &c. E. Natali, 207 Old Street, London, near Pitfield Street.

Formulae.

Cheap dental filling, sets hard as adamant in an hour; natural tint; case containing 48 fillings, 3s., prepaid, or formula 21s. Benedict & Co., Birkenhead Park, Birkenhead.

Whooping cough, an infallible specific, two or three applications cure very bad cases; splendid proprietary, cheap; formula 2s. 6d. Benedict & Co., Birkenhead Park, Birkenhead.

Every Provincial Chemist should manufacture a baking powder which he can proudly label as prepared by himself; a 5s. postal order will enable him to do so; cost price 5d. per lb., to retail at about 8d. Address, J. G. Oliver, Chemist, 20 Jamaica Road, Bournemouth, S.E.

Following valuable recipes, warranted to give satisfaction; 9d. each, or 6s. dozen:—Quinine and iron tonic, pleasant, does not produce headache; liver pills, soothing, gentle action, none better; glycerine cream, perfection of toilet articles, used in summer and winter; nursery hair-wash, non-poisonous, but fatal to insect life; limes and glycerine, really splendid; hair-restorer, clear liquid, and effectual; pill-coating, full instructions enabling anyone to coat them; Easton's syrup, made in a few minutes; food-preserver, costs 8d. lb.; teething powders, best going, everyone should put them up, cost trifling. A. Lee, 10 Queen Street, Chesterfield.

Soluble essences (non-alcoholic, for mineral waters); lime-juice cordial; chlorodyne (perfectly transparent); cascara sagrada cordial; concentrated waters (1 to 40); essence rennet (permanent, no salt); hop hitters; liquor carbonis (resembles Wright's); chemical liquors for syrups (stable); lac rosarum (inseparable, made in few minutes); ink (resembles "Dichroite"); elixir phosphori, invigorating tonic; sponges bleached (golden yellow); liquid dentifrice (like "Floriline"); marking-ink, *sine* silver, writing executed defies chemicals; saline (Eno's or Lamplough's); magic neuralgic drops; lime-juice and glycerine (white as milk, inseparable); pill-coating, pearly white, no mastic or mucilage; crimson marking-ink; hair-restorer, colourless, no deposit, *sine* silver; oleum flavum concentratum, stable colour for pomades; soluble gloger (like Hay's); liquor copaibae comp. c. huchu et matico (like Richardson's); liquor santal. flav. (resembles Hewlett's); taraxicum podophyllin, iron quinine (both resemble Pepper's); many perfumes, also toilet requisites; state wants; lists issued; all inexpensive to prepare; 5s. each (5 for 17.); analyses undertaken. Readers are warned against cheap substitutes. I was first to advertise formulae in this journal. "Analyst," Mr. Warnes, 6 Rochester Square, N.W. (Only prepaid inquiries answered.)

Well-tried, reliable formulae.—"Entirely New Toothache Remedy," gives instant ease, non-poisonous, infallible; "Nigerine," brilliant jet-black, waterproof patent blacking, better than Nubian; "Lupuline Bitters," the king of pick-me-ups, quite equal to American preparation, one-third price; "Digestive Relish," mellow, piquant, appetising, from 3s. gallon; "Lime Cream and Glycerine," elegant, creamy, snow-white, perfectly inseparable, warranted best in market; "Foaming Dentifrice," resembles Floriline, one-eighth cost; "Antispasmodic Elixir," truly invaluable for wind, indigestion, &c., one dose relieves; "Corn and Wart Eradicator," quickly removes corns, cleanly, painless, warranted a genuine proprietary article, and certain to give satisfaction (resembles Hargreaves); "The Chemist's Luk," most perfect ever introduced, particularly adapted to chemists; "Lincolnshire Bouquet," most excellent, full-bodied, perfume resembling Mona hougnet; "Chlorodyne," mixes freely with water, &c., inseparable, equals Brown's, inexpensive; "Peruvian Gout and Rheumatic Pills," these, sold under another name, have enormous sale; "Cough Syrup" (like Kay's essence), will cure most obstinate coughs, certain in action, easy cost; "Effervescent Depurative Saline," *facsimile* of Eno's, perfectly soluble, keeps well, costs 107. 10s.; "Cryptzomosis," safe, certain, speedy cure for gleet, &c., long-standing cases quickly succumb; "Lavender Water," excellent, equals Sainsbury's in fragrance, superior to many costly bouquets; "Essence of Deafness," simple, rapidly effectual, inexpensive; "Worm Syrup," purely vegetable, pleasant taste, rapid action; "Mist. Gouorrhea," radical cure, male or female, taste covered. Price 1s. 1d. each, 3 for 2s. 6d., 25 for 17. free. Detailed lists and particulars of any post free. T. Brooks, Chemist, Louth, Lincs.

Miscellaneous.

Glycerine sheep-dip for about 1,000; what offers? 122/5.

5 cwt. dried rad. tarax. fine, collected in neighbourhood; offers wanted. Kemp, Horn-castle.

Large hock-tin worm and tuh; also one Stiff's earthenware still, tuh and worm at a very low price. Address, T., 48 Baker Street, W.

Good honey-comb sponge, small; ferri sulph., common; acid carbohc, common; fire lighters; pulv. disinfectant, &c. 124/2.

Maw's fig. 5 counter scales, to weigh 7 lbs.; Maignen's No. 1 (1 gallon) copper filter rapide; Chemist's Optical Association's spectacles. 123/40.

American iced-drink machine, nickel-plated, with 6-gal. copper cylinder, and 12 syrup-hottles; price 107., cost double; open to exchange. Thresh, Buxton.

Pessary-mould for 36, perfect, in use, size 2 drachms; Florence flasks; 3 wire window-blinds; spectacle show-card, movable by electricity; Bunsen lamp. Wilks, Burnley. **A chamber organ,** partly built, 108 wood pipes, 126 metal pipes; particulars for one stamp. Samuel Oldham, Druggist, Mottram, Manchester.

Pharmaceutical Journals, 1874 to 1875, few missing; also *Chemist and Druggist*; 2, 27 inch specie jars, slightly damaged; galvanic battery under shade, good condition, cheap or exchange. Furnival & Eardley, Chemists, Hanley.

Two No. 5, six 5A Goodyear Rubber Company's enemas, 10s.; 30, 1 doz., 10, 2 doz. hlu soda-water cases, 30s.; 1, 2s. 9d., 2, 4s. 6d. Battle's rheumatic mixture, 5s.; 100 lbs. tea siftings, cost, duty paid, 123/4. 47. Offers to Cartlough & Sons, Horncastle.

Photographic Stock.—Clearance.—2s. cabinets, 1s. each (actresses, celebrities, royalty, &c.); 1s. cartes, 6d. each; artists' studies (undraped), one-fifth off. Lists 1d.; stereoscope slides, cheap. William Turner, Chemist, Totterdown, Bristol.

Lot 1, 1½ oz. codeia, for 45s.; lot 2, 1 oz. finest grain Tonquin musk, warranted pure, for 47.; lot 3, 50 drachms pure extra virgin otto of roses, warranted, for 67.; lot 4, 2 lbs. finest hold vanilla, for 48s.; lot 5, 2 drachms vanilline crystals, for 3s. 6d.; lot 6, the following 7 articles: 4 oz. Savory's extract, coce liquid., 8 oz. plumhi iodid., 1 lb. 3 oz. hydrarg. sulphid. flav., 1 oz. menthol crystals, 2 oz. oleum sinapis essent., 3 oz. tetrachloride of carbon, 3, 2-oz. stoppered bottles of ozonic ether for 14s. Miller, 102 Fortress Road, Kentish Town, London, N.W.

WANTED.

Gum acacia; sorts, samples, and price to Furnival & Eardley, Chemists, Hanley.

Large crystal for window; state size, price, &c. Goulden, Bromley, Kent.

Official Register of Chemists for 1884 or 1885; state price. Marson, Stafford.

Bradbury & Cooper's fly-powder, tins or packets; gallon carbon filter. 121/16.

A good field-glass, cheap; also eye-shades. W. G. F., 42 Cannon Street, E.C.

Chemist and Druggist for August, 1885. C. G., 9 Mincing Lane, E.C.

Recent Major books, cheap; hiding no object. Barrett, 46 New Street, Birmingham.

Half or whole plate Lancaster's "Instantograph"; cash. C. T. G., 34 High Street, Putney.

Nests mahogany-fronted drawers, four deep, 24 in. high, from 4 ft. to 7 ft. long; also 3-lb. shop jars. Harrison, Chemist, Loughton.

Tikheel, anti-fat, Barrow-Evans' restorer, Bunter's nervine, Holden's stomach mixture. Mickle, 48 Stanley Road, Liverpool.

Highest value given for old gold and dental metals; 25s. per oz. for platinum scrap. Entwistle, 39 Shaw Street, Liverpool.

Surplus stock of all kinds, cheap, for cash. Wilkinson, Commercial Buildings, Norman-ton.

Suppository-mould, electroplated, for 12; must be in good condition. Williams, Chemist, Hayle, Cornwall.

Shop-fittings, counter, standard bottles, pots and carboys, &c.; must be cheap, for cash. J. T. Freeman, 83 Newport Road, Middles-borough.

A mahogany pianoforte wall case; 10 ft. long by 8 ft. 9 in. high; or a wall case with sponge case under; also glass window fittings for a 6 ft. window. Waterhouse, 104 High Street, Ramsgate.

Addresses and Information Wanted.

John Brokenshire, late tea traveller, postal order 2s. 6d. for first present address. 123/4.

Formula good baking powder without tartaric acid, pot. bitart., alum. J. C. Lingdale, Skelton, R.S.O.

1885. NINETEENTH SEASON.

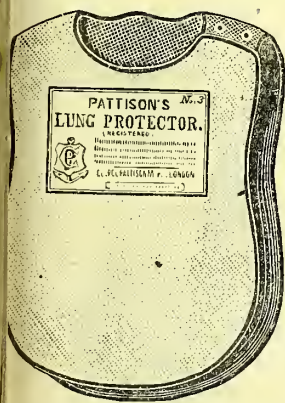
THE LUNG PROTECTOR

REGISTERED
LUNG
PROTECTOR
TRADE MARK

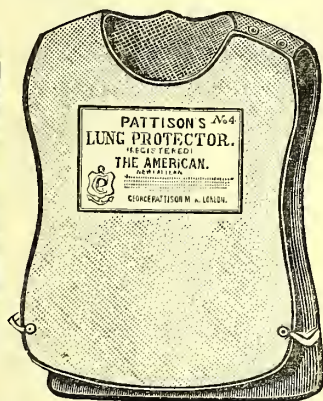
(REGISTERED).

"An Article of Acknowledged Excellence."

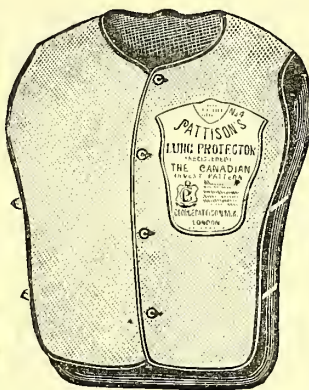
The "LUNG PROTECTOR" continues to be made only from the same Fine Soft Wool which has always been used since its introduction 19 years ago. Chemists are cautioned against the coarse and inferior imitations that are pushed upon them, the sale of which can only lead to ultimate loss of trade.



THE
LUNG PROTECTOR.
ORIGINAL PATTERN.



LUNG PROTECTOR.
THE AMERICAN.



LUNG PROTECTOR.
THE CANADIAN.



CHEST PROTECTOR.

PRICES:

	No. 0	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	
Original Pattern, Seven sizes	14/-	18/-	26/-	34/-	42/-	52/-	60/-	per doz.
The American, Six sizes	20/-	28/-	36/-	44/-	54/-	62/-		"
The Canadian, Six sizes	22/-	30/-	40/-	50/-	60/-	70/-		"

FELT CHEST PROTECTORS.

Prices...	No. 00	No. 0	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	
	4/-	6/-	8/-	10/-	12/-	16/-	20/-	24/-	per doz.

All in Scarlet and White, and made in same Wool as the "Lung Protector."

Terms: All Wholesale Houses either allow a large Discount for Cash, or quote the goods at Reduced Net Cash prices.

FELT CHEST PROTECTORS, C QUALITY, single and double, each in five sizes.

At lower prices than above, and equal to BEST of other makers, but are NOT recommended.

GEORGE PATTISON,

INVENTOR AND MANUFACTURER,
139 ST. JOHN STREET ROAD, LONDON, E.C.

FRED LEWIS' WHOLESALE PRICE LIST.

ELECTRIC OIL, for the Hair. 2s. 6d., 20s. doz.; 3s. 6d., 27s. doz.
TROTTER OIL. 2-oz., 4s.; 3-oz., 6s.; 4-oz., 8s.; 6-oz., 12s. doz.
DEPILATORY POWDER. 3s. 6d., 27s. doz.

5 per cent. cash with order. Trade only supplied. Goods specially made to suit all climates.

FRED LEWIS, DUBLIN.

Office—6 FLEET STREET. Steam Works—ASTON'S LANE. Stores—BEDFORD ROW.
 SPECIAL TERMS TO SHIPPERS.

HAMAMELIS BY HER MAJESTY'S ROYAL LETTERS PATENT, 1884.

The finest Toilet Soap in the World. See *The Lancet*, *British Medical Journal*, *U.S. Dispensatory*, and other medical evidence, on the value of Hamamelis for the skin.

Dr. THOMAS SIMPSON, Glasgow, writes:—"I have used the soap you sent me and can give it unqualified praise. Hamamelis Virginia has been used in Homoeopathic practice for twenty years, so that it is not an untried remedy, having proved of incalculable value in many disorders of the skin, especially in varicose states, &c., &c., and you have met a long-felt want in bringing it more prominently into public notice."

Dr. PROCTOR writes:—"Owing to the chemical qualities of Hamamelis, this soap is manufactured with less Alkali than any other of similar quality, and is, therefore, the most valuable soap for the nursery. It possesses the most marked cooling and astringent properties, and thus softens and beautifies the complexion by acting on the pores of the skin, preventing the occurrence of redness or blotches and the formation of pimples, by freeing the sweat glands."

Numerous other Medical Authorities (too numerous to mention) unite in commending Hamamelis for the skin.
 "There is no more delightful toilet soap in existence, and Hamamelis only needs to be used to find a permanent home in every house."—*Court Circular*.
 "The Hamamelis Toilet Soap has, in addition to its invaluable healing qualities, a delicious fragrance and when once used will be found absolutely indispensable to the toilet."—*Court Journal*.

Price—Plain, 1s. 6d. per Box of 3 Tablets; Highly Perfumed and Wrapped, 2s. 6d. per Box.

See "INVENTIONS," STAND 272a, SOUTH CENTRAL.

Sole Proprietors and Makers—

Jas. Alexander & Co.,

Pure Toilet Soap Works, Lambeth S.E.

W. S. YATES,

Chemists' Shop Fitter, Shop Front Builder, and
 Glass Show Case Maker.

DENTIST CASES.

Plans and Estimates supplied for Work in any part of the Kingdom.

9 CAMDEN STREET, LIVERPOOL.

See July issue of *THE CHEMIST AND DRUGGIST* for List of Shops
 Fitted by W. S. Yates.

USEFUL AND NOVEL PRESENTS



ASHWORTH'S NEW PATENT "METALLIC COMB-BRUSH."

USEFUL AND NOVEL PRESENTS
 SET WITH FINE STEEL WIRES AND ENCLOSED WITH BRISTLES.
 These brushes are delightfully cool to the head, producing a most agreeable sensation, and will penetrate the most luxuriant hair without injury. They are altogether machine-made; the black handles are covered with a coating of Japan burnt on and then polished. These handles are also in solid pieces, and hence will not fall apart as in the case of brush handles covered with veneer. The latter brush shows a most remarkable development in metallic brush making. It is made of fine hard drawn steel wires, about the thickness of ordinary bristles. This penetrates, smoothes, and fixes the hair. It is, to express the words of a user, "Simply perfection as a hair brush, and must, when known, take the place of the bristle brush for toilet uses." Send for a SAMPLE BY POST AND TRY IT.

Prices of Metallic Comb-Brush, post free.

Ladies' and Gentlemen's Black Japan	1/6, 1/9, 2/0
" " Ivorite-figured	1/9, 2/0, 2/3
" " Ivory-coated	1/6, 2/0
Gentlemen's Black Japan, Military Style	2/0, 2/6, 3/0

Doz. Cattle and Horse Brushes	2/0, 2/6, 3/0
New Patent Fine Steel Comb-brush with or without bristles, post free.	
Ladies' and Gentlemen's Black Japan	1/9, 2/0, 2/3
" " Ivory-coated	2/0, 2/3, 2/6
Gentlemen's Black Japan, Military Style in fine steel only, without bristles	— 2/3, 2/6

These brushes are now enclosed with bristles in order to give them a more finished appearance. They can, however, be had without the bristles, but all orders for the former must quote the letter "B" following the number of brush required, as "Fine Steel Black Japaned No. 8 B," or "No. 9 B," &c.

All Goods are forwarded safely packed in Neat Boxes.

ASHWORTH BROS., MOSBROOK WORKS,
 COLLYHURST MANCHESTER, ENGLAND.

WATERS OF EBLANA. 1s. 8s.; 2s., 16s. doz.

HAIR COLOUR RESTORER (Registered), free from Sediment.
 2s. 6d., 20s. doz.

Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester.
 May be had from S. Maw, Son, & Thompson; Barclay & Sons;
 F. Newbery & Sons; Sanger & Sons; and any Wholesale
 House in London. Price 2s. per Box, and Family Jars 10s. each.

PRICE'S PATENT CANDLE COMPANY LIMITED

LONDON AND

LIVERPOOL



PRICE'S GLYCERINE

HAS RECEIVED THE HIGHEST AWARDS AT ALL THE
 GREAT EXHIBITIONS.

OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/, 1/9, and 3/6; Wholesale, 7/, 12/, and 22/6 per doz.
 This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for WHOLESALE Agencies to be made to the SOLE
 CONSIGNEE, THOMAS WEST, Chemist, 61 Chester
 Road, Stretford, Lancashire.

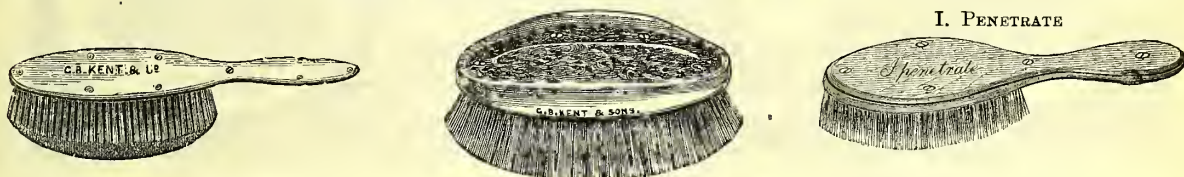
STANDARD G. B. KENT & SONS BRUSHWARE

HAIR. CLOTH. BATH. SHAVING. NAIL. TOOTH. FITTED CASES. SPONGES.

Offices: 11 Great Marlborough St., London, W. Factories: 46 Bonner Road, London, E.

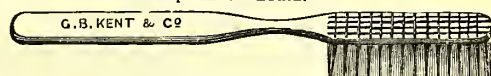
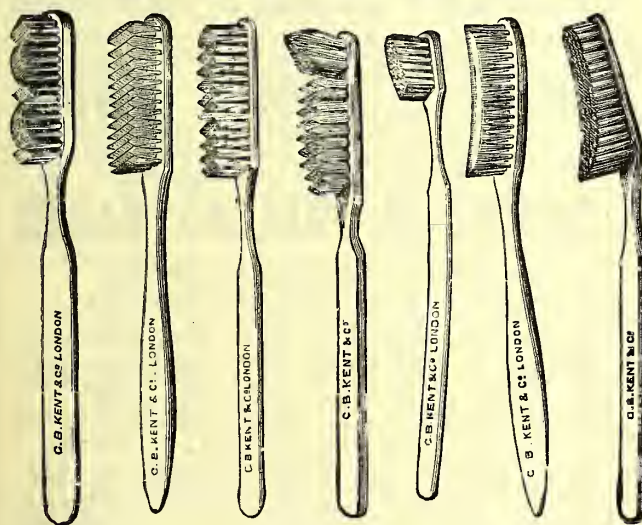
CALCUTTA EXHIBITION, 1884, GOLD MEDAL.

KENT'S HAIR BRUSHES.



KENT'S TOOTH BRUSHES.

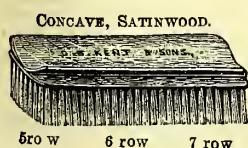
N.B.—Special Factories at Victoria Park are set apart for this one description of Brush.



THE NOVELTY TOOTH BRUSH.
TRIPLE CEMENTED AND EXTRA SECURE.
Depôt for America: 91 Fulton Street, NEW YORK.

			Price per doz.
First Quality	G. B. Kent & Sons	London	6/6
Second Quality	Imperial	Quality	5/0
Third Quality	WARRANTED	LONDON	4/0
Fourth Quality	WARRANTED	SECURE	3/6
Fifth Quality	WARRANTED	SOUND	3/0
Badger Hair Tooth Brushes	..	4/6 6/0 8/6 11/0	per doz
Children's	..	3/0 3/6 4/0	"
Tooth Brush Guards	..	Metal, 3/3 Porcelain, 4/6	"
Japanned Wet Brush Holders	..	3/6 6/0 13/0	"

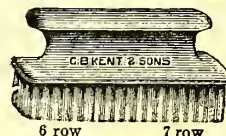
KENT'S NAIL BRUSHES.



5 row 6 row 7 row



HUMP NAIL BRUSH, SATINWOOD.



6 row 7 row

SPONGES.—At 11 Great Marlborough Street is a Sponge Room worth the inspection of the Trade.

G. B. Kent & Sons' Illustrated Catalogue, containing 700 woodcuts, will be forwarded free on application.



WHICH IS CHANGED BY HEAT TO A JET BLACK.
Put up for Retail Sale in 6d., 1/, 2/, 2/6, & 5/ Bottles.

Also Barber's Concentrated Liquid **COCHINEAL**, for Colouring Jellies, Custards, &c.
Put up in 6d. and 1/ Bottles.

MANUFACTURED ONLY BY THE PROPRIETORS—
G. BARBER & CO., 6 Worcester Drive, Club Moor, LIVERPOOL.

Can be obtained through any of the Wholesale Firms, or from the Proprietors, G. BARBER & CO., Club Moor, Liverpool.

PHOENIX ESTABLISHED A.D. 1815 **MARKING INK**
GENUINE INDELIBLE

THE LEADING & STANDARD ARTICLE
PREPARED ONLY BY THE WIDOW OF THE LATE
JOHN MURPHY
CHEMIST AT THE ORIGINAL ESTABLISHMENT
11, NILE STREET, EAST ROAD, HOXTON N.

THE ORIGINAL
TRADE MARK.
Estab^d 1815.

NO OTHER ADDRESS — BEWARE OF WORTHLESS IMITATIONS.

ESTABLISHED 60 YEARS.

Exhibitions—1851, 1862; Paris, 1867, 1878.

LEATHART'S EXHIBITION HAIR DYES

To Retail at 1/-, 2/6, 3/6 and 5/6. See Price List.

To Dye instantaneous, Black, Dark Brown, Ordinary Brown, Light Brown, and Special Brown.

LEATHART'S COLORIFIC.

A Stain in one preparation; perfect, light, and ordinary browns.
To Retail at 3/6; 24/- per dozen.

EXHIBITION DYE IN BULK.

2/6, 6/-, 10/-, £1. Five Colours.

ONE PREPARATION IN BULK.

MALACCA JUICE.

Winchester (4 pints), 14/. Sample Bottle, carriage free, 1/6.
AN ORIGINAL PREPARATION. QUICK IN ACTION.

179 Ladbroke Grove Road, Notting Hill, LONDON, W.

N.B.—Price List will be forwarded.

USE ELECTRIC

OXYOZO, POWERFUL DISINFECTANT,

Instantaneous and Perfectly Inodorous.

6 oz., 6d.; 4s. 3d. per dozen.

13½ oz., 1s.; 8s.

”

H. CHURCHILL, MANUFACTURER,

254 LOWER BROUGHTON ROAD, MANCHESTER

CHUBB'S ^{Best} SEIDLITZ POWDERS

—Full Weight—Loose, at 7s. per gross; in lift-off boxes, 7s. 6d., and in hinged boxes, 8s. 6d., per dozen.

CHUBB'S Extra Scented VIOLET POWDER

(WARRANTED PURE STARCH POWDER),

In 1d. Boxes, 6s. gross, and 2d. Boxes, 11s. gross, and in ¼-lb. and ½-lb. Packets, 10d. per lb.

CHUBB'S Pre- pared FULLER'S EARTH

In 1d. Boxes, 5s. gross, and 2d. Boxes, 9s. gross, and in 3d. and 6d. ROUND Boxes, 1s. 6d. and 2s. 6d. dozen.

SUBJECT TO 15 PER CENT. DISCOUNT FOR CA

May be obtained through all the Wholesale Houses, or direct from
CHUBB & CO., 29 OLD ST., LONDON, E.C.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES.

WINTER SEASON, 1885-6.

KAY'S FAMILY REFERENCE ALMANACK, 1886.

Chemists may be supplied with the above popular Annual, with their names, &c., on the cover, free of charge, on writing to Messrs. KAY BROTHERS, and undertaking their distribution from house to house as soon as received. Also 1,000 bills for counter use, with name and address, if asked for. Enclose two (2) labels for correct address, with population of the district and best means of conveyance, under cover (labels on post card, being contrary to regulations) addressed "Advertisement Department," at your earliest convenience. The Almanacks will be sent direct from the printer, with counter bills, showcards, &c., if required.

"COAGULINE" TRADE MARK.

Kay's New Transparent Cement for Broken Articles.
"Clear as Crystal," "Stronger than Glass," "Tough as Leather," 6d., 1s., 2s., in Boxes or on Cards. Showcards, Handbills, with name, &c. Specimens, &c., for home or export, free.

KAY'S COMPOUND

ESSENCE OF LINSEED, ANISEED, SENEGA, SQUILL, TOLU, &c. (with Chlorodyne), 9½d., 13½d., 2/9, &c.

KAY BROS., OPERATIVE CHEMISTS, STOCKPORT.

7, 9, & 13 Lower Hillgate,
Works and Laboratory: ST. PETERSGATE.
Successors to Sims, Shaw & Hornby. Founded by Olive Sims, 1786.



LYNCH'S
Popular Electro Magnetic

SYDNEY, 1879.



HAIR BRUSH.

The Popular Electro Magnetic Hair Brush is designed so that in brushing the head a gentle stream of Electricity flows through it, thereby causing a healthy action of the bulbs containing the roots of the hair. It is also a sure and harmless remedy in all Nervous, Rheumatic, or Neuralgic affections of the head, relieving headache in a short time.

A small Compass accompanies each Brush, so that the presence of the Electric current can easily be tested by passing the Brush around it.

PRICE 5/- EACH.

RETAIL TRADE PRICE 36/- DOZEN, LESS USUAL DISCOUNT.

Sole Manufacturers: **LYNCH & CO., LONDON.**

TO THE TRADE. SPONGE.

Before making your purchases, it may repay you to call and inspect our stock of Honey Comb and Turkey.

We have just opened a shipment of Florida Sheep's Wool, per "Celtic," well deserving your attention. Quality unsurpassed, price remarkably low.

**LYNCH & CO., ALDERSGATE STREET,
LONDON, E.C.**

BETHSHAN. The certain cure for the
TOOTHACHE.

BETHSHAN. If used as a Tooth-powder
will prevent

BETHSHAN. Neuralgia and absolutely
arrest all decay

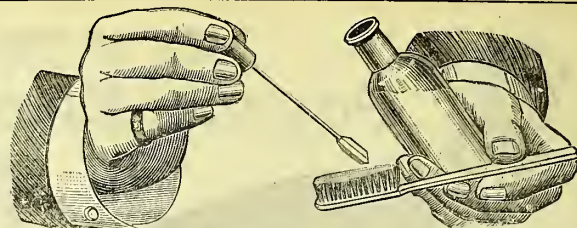
BETHSHAN. Of the Teeth, also preserve
them healthy

BETHSHAN. and sound to extreme old
age.

BETHSHAN. Everyone should try it,
especially Smokers.

Can be obtained of all Chemists, or will be sent free by post on receipt of
15 stamps, direct from the Proprietors, **HARDEN & CO.**, Shirley,
Southampton.

AGENTS WANTED.



FERGUSON'S PATENT TOOTH POWDER OR DENTIFRICE SPOON,

For Supplying Tooth Powder or other Dentifrice to the Brush.

The spoon is fitted inside a suitable bottle, which forms a receptacle for the denti-
frice, the spoon itself acting as an air-tight stopper to the bottle.

8s. per dozen; retail, 1s. each.

The bottles are sold empty, consequently they increase the sale of tooth powder
from bulk. Wholesale from

J. A. FERGUSON, 53 GT. GEORGE STREET, LEEDS.
And the following London Agents:—Barclay & Sons; Bourne & Taylor; Edwards
& Sons; Hovenden & Sons; Lynch & Co.; Maw, Son & Thompson; Newbery &
Son; Thompson, Millard & Co.; and all the principal Provincial Houses.

IMMENSE SALE.

SOLD EVERYWHERE.

WOODS' ARECA NUT TOOTH PASTE,

For Removing Tartar, Whitening the Teeth, and Sweetening the Breath.

PRICE, 6d. and 1s. per Pot.

MAY BE HAD OF WHOLESALE HOUSES THROUGHOUT THE GLOBE.

ROZALIMUM

(REGISTERED)

POWDER OR PASTE

IS THE BEST DENTIFRICE.

It is scientifically prepared by a Dental Surgeon, of large practice and
great experience, and is intended to supply a long felt want, viz, a
Preparation that will thoroughly cleanse the Teeth, and at the same time
help to preserve them. As a stimulant to the Gums, and a preservative
of the Teeth, Rozalium is not to be surpassed; it gives to the Teeth a
pearly whiteness, to the Gums a healthy rosy colour, whilst it prevents
decay by neutralizing the acids which accumulate between the Teeth, and
imparts to the Breath a most delicious fragrance.

In Boxes, Pots, and Bottles, 1s. and 2s. 6d.

May be obtained from the Wholesale Houses, or direct from the
Proprietor—

J. W. MARTIN, Dental Surgeon,
PENGE.

Title Secured. Price 2/6. Cases of Six, 14/-



TRADE MARK 27668.

INVENTED BY A TALENTED PHYSICIAN.

Recommended by eminent Surgeon-Dentists. Patronised by the "Monde
élégant" as the best and most agreeable liquid Dentifrice yet introduced.

PROPRIETORS—

BARTON BROTHERS, BRIGHTON.

Also Sole Proprietors of the Original

"BRIGHTON GLYCERINE CREAM."

WHOLESALE FROM

Messrs. Barclay, E. Cleaver, Edwards, Newbery, Sanger, Sutton & Co.

WHITE AND SOUND TEETH.

JEWSBURY AND BROWN'S ORIENTAL TOOTH PASTE.



This old-established and increasingly favourite Dentifrice has been Fifty Years before the Public
It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

JEWSBURY and BROWN,
CHEMISTS, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed.
Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered.

Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

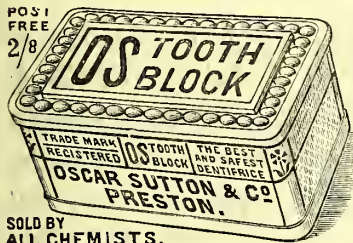
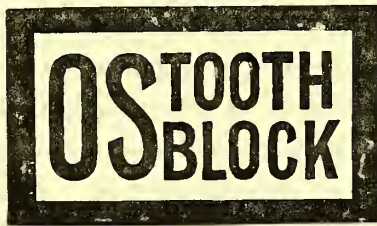
The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on
receipt of address card, and directions for enclosure.

OSCAR SUTTON & CO., PRESTON, LANCASHIRE.

O.S. TOOTH BLOCK.

Be particular to observe that the Registered Trade Mark and the name "OSCAR SUTTON & CO." are stamped on all that are genuine, as worthless imitations are in the market.

REGISTERED

SOLD BY
ALL CHEMISTS.

TRADE MARK.

OVER 1,000 TESTIMONIALS.

WHOLESALE—Messrs. Barclay, Butler & Crispe, Hovenden, Maw, Edwards, Newbery, Sanger, W. Sutton & Co., Evans, Lynch, Raimes & Co., Thompson, Curling & Co., Bourne, Johnson & Latimer, Burgoyne, Burdidge & Co., Burgess, Willows & Francis, Oppenheimer & Co., Ayrton & Saunders, &c.; of all the leading Dental Houses; also of Messrs. Felton, Grimwade & Co., Locke, Tompsett & Co., Melbourne; and the principal Colonial Agencies, &c.

Write to the above address for particulars.

BEST & SAFEST DENTIFRICESOLD BY ALL CHEMISTS
AND PERFUMERS, IN
ELEGANT CRYSTAL
TOILET CASKET

PRICE 2/6.

ALSO IN PATENT
METALLIC BOX

PRICE 1/-

**ODONTOBAPH****ODONTOBAPH****ODONTOBAPH**The new Tooth Paste, Powder, Tooth Brush
and Mouth Wash.

TO RETAIL FROM 6d. TO 2s.

IT WILL PAY YOUODONTOBAPH
REGISTERED.To apply for an agency
for the sale of ODonTO-
BAPH. You will sell
more of it than any other
Tooth Paste and Powder
made.It is being very exten-
sively advertised.

Mrs. LANGTRY writes—

"I think the ODonTOBAPH
is excellent and most pleasant to
use."

Signed, "LILLIE LANGTRY."

Madame ADELINA PATTI
writes—"I have tried your ODonTO-
BAPH Tooth Paste, and find it
much pleasanter than other
Tooth Pastes."

Signed, "ADELINA PATTI."

Madame MARIE ROZE writes—

"I have much pleasure in stat-
ing that the ODonTOBAPH is a
most delightful preparation, and
invaluable for cleansing and pre-
serving the teeth."

Signed, "MARIE ROZE."

MANUFACTURED BY

THE ODonTOBAPH CO., 22 CANNON STREET, BIRMINGHAM.

WHOLESALE AGENTS:

LONDON—W. Edwards & Son; Barclay & Sons; S. Maw, Thompson & Co.
COVENTRY—Wyleys & Co.

LIVERPOOL—Evans, Sons & Co.

EIGHT PRIZE MEDALS.**GUSTAV BOEHM'S****TRANSPARENT GLYCERINE SOAP**, Manufactured with Pure Spirits of Wine and Purest
Glycerine. The first Soap of this description introduced in this market, and still recognised the best. Prices have been reduced lately.**PURIFIED TOILET SOAPS**, Highly Scented. Large variety of such delicate Scents as
Ess. Bouquet, Jockey Club, Musk, Oppopanax, Rose de Mai, New Mown Hay, Violet, Lavender, Tea Rose, Mignonette, and many other
distinct Perfumes.**CALCUTTA GOLD MEDAL EXHIBITION SOAP**, assorted in 12 different scents
and colours.**WINDSOR, HONEY, OATMEAL, COAL TAR, CARBOLIC**, and all kinds of
ordinary Toilet Soaps.**EXTRACTS OF FLOWERS**, Triple, Double, and Simple.**FLORAL PERFUMES**, with appropriate Silk Flower Labels—very attractive.**LAVENDER WATER, FLORIDA WATER, EAU DE COLOGNE**, and all other
Toilet Waters.**DENTIFRICE. VIOLET POWDER**, and all other Requisites for the Toilet.**PETROSINE POMADE and PETROSINE IN BULK**—a Petroleum Jelly, guaranteed
never to turn rancid.MANUFACTORIES { 38 CHARLES STREET, CITY ROAD, LONDON, E.C., and at
OFFENBACH o/MAIN, GERMANY.

LEADS ON TO FORTUNE.

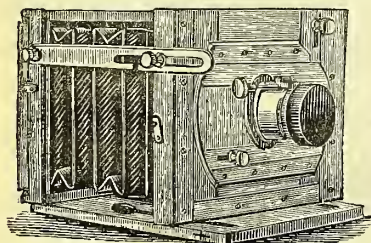
It is universally admitted that trade is bad, and it behoves one to be on the alert to increase one's business in every legitimate manner possible. Messrs. J. LANCASTER & SON feel confident that the addition of a Photographic Department to every Chemist's Business in the country will prove of great value—not only in the creation of a new trade, but also in the further development of present clientele. It is not the Apparatus only but Chemicals that Amateurs will purchase, and to the enterprising Chemist who will study Photography himself, and then give lessons to his customers, success is certain to follow him.

PHOTOGRAPHIC APPARATUS,

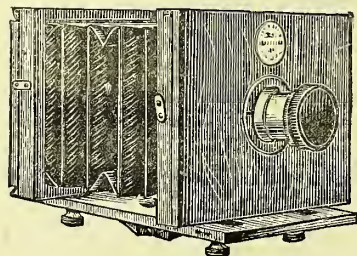
FOR TOURISTS, BICYCLISTS, TRICYCLISTS, ETC.

OVER 15,000 NOW SOLD.

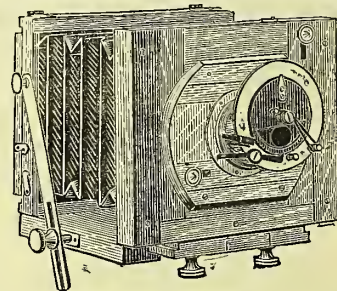
Each Apparatus includes CAMERA LENS and STAND. CYCLE CLIP may be had in place of STAND.



LE MÉRITOIRE.



LE MERVEILLEUX.



THE INSTANTOGRAPH.

	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{3}$	10 by 8	12 by 10
LE MERVEILLEUX	£1 1 0	£2 2 0	£3 3 0	£4 4 0	£5 5 0
LE MÉRITOIRE	1 11 6	63 3 0	4 10 0	6 0 0	7 10 0
THE INSTANTOGRAPH	2 2 0	4 4 0	6 6 0	8 8 0	10 10 0

Sets of Plates, Dishes, Chemicals, Lamp, &c., with full instructions, $\frac{1}{4}$, 6/6; $\frac{1}{2}$, 12/; $\frac{1}{3}$, 20/; 10 by 8, 25/.

Sets of Printing Materials, Sensitised Paper, Printing Frame, Dishes, Toning and Fixing Solution, and full instructions, $\frac{1}{4}$, 5/; $\frac{1}{2}$, 10/6; $\frac{1}{3}$, 15/; 10 by 8, 21/. Dry Plates, $\frac{1}{4}$, 1/6; $\frac{1}{2}$, 3/6; $\frac{1}{3}$, 7/; 10 by 8, 11/ per doz.

Instantaneous, $\frac{1}{4}$, 2/; $\frac{1}{2}$, 4/; $\frac{1}{3}$, 8/; 10 by 8, 12/ per doz.

ILLUSTRATED CATALOGUE POST FREE TO CHEMISTS.

TENTH THOUSAND.

"How to be a Successful Amateur Photographer," by W. J. Lancaster, F.C.S., &c., 64 pp., 6 Stamps.

Special Terms to Chemists.

J. LANCASTER & SON, OPTICIANS, BIRMINGHAM.

CAUTION.**A. S. LLOYD'S EUXESIS,
FOR SHAVING WITHOUT SOAP, WATER, OR BRUSH.**

The GENUINE Euxesis bears the following distinctive marks :—

- 1.—The Name **AIMEE LLOYD** on cap of tube.
- 2.—The words "**Prepared only by his Widow**" in **RED INK** across labels.

Manufactured only by AIMEE LLOYD,

WIDOW OF A. S. LLOYD, formerly of 27 GLASSHOUSE STREET,

3 SPUR STREET, LEICESTER SQUARE, LONDON.

A. S. LLOYD'S EUXESIS,

For Shaving without Soap, Brush, or Water.

CAUTION.

The only Genuine has a yellow label printed **ONLY** in Black Ink, and bears the original address of the late inventor, "27 Glasshouse Street, Regent Street," the proprietors having purchased, under an administration suit, the Secret, Trade Mark, Goodwill, and Premises:

SOLE PROPRIETORS.

**R. HOVENDEN & SONS,
LONDON.****H. NEWTON & CO.,**

MANUFACTURERS AND EXPORTERS OF

PHOTOGRAPHIC APPARATUS AND CHEMICALS,

5 SOUTH JOHN STREET, LIVERPOOL, ENGLAND.

NEWTON'S NEW "ORTHOPANACTNIC" LENS, acknowledged to be the most perfect Lens made, for Landscapes, Portraits, Architecture, Groups, and Copying. Cash returned, if Lens is not perfectly satisfactory.

NEWTON'S NEW PORTABLE CAMERA, being the lightest, strongest, and most convenient Camera in the market, from 3 inches to 17 inches focus, rack adjustment, rising and falling front, swing back, &c. Price, with 3 double dark slides, £8 8s.

NEWTON'S "MULTUM-IN-PARVO" TRIPOD STAND (Sharp's Patent), simply marvellous, packs into small sling case, 5 x 5 x 2 inches, when erected will support a weight of 56 lbs. Price 25s.

NEWTON'S NEW WASHING APPARATUS, will remove every trace of Hypo from a dozen plates or 100 prints in an hour, constructed on an entirely new principle. Prices, $\frac{1}{2}$, 15s.; $\frac{1}{3}$, 21s.

NEWTON'S NEW HEADREST for AMATEURS, can be attached to any chair. Nickel plated, handsome in appearance, and very portable. Price 12s. 6d.

NEWTON'S "TOURIST" OUTFIT, comprising handsome Mahogany Bellows-body Camera, Achromatic Lens, and Folding Tripod Stand, for plates $6\frac{1}{2} \times 4\frac{3}{4}$, 45s.; ditto for plates $4\frac{1}{4} \times 3\frac{1}{4}$, 31s. 6d.

NEWTON'S "TOURIST" RUBY LAMP, very portable, for Bicyclists, &c., folds into one inch. Price 3s.

NEWTON'S PERFECTION DRY PLATES are unequalled for rapidity and general excellence. $\frac{1}{2}$, 1s. 6d.; $\frac{1}{3}$, 3s. 6d. doz.

All articles connected with Photography at **LOWEST POSSIBLE PRICES** consistent with high-class work. All the Latest Novelties.

H. NEWTON & CO., 5 SOUTH JOHN STREET, LIVERPOOL.
N.B.—Wholesale Terms on application.

INDEX TO ADVERTISEMENTS,

THE SEVENTH ANNUAL EXHIBITION & MARKET

OF PRODUCE, MACHINERY, AND APPLIANCES USED BY

Brewers, Maltsters and Distillers, Mineral Water Makers, Wine and Spirit Merchants, Licensed Victuallers and Hotel Proprietors.

BREWERS' CONGRESS, MINERAL WATER TRADES' CONGRESS.

AGRICULTURAL HALL, OCT. 26th to 31st, 1885.

Forms of application for Space, Plans, and Full Particulars of A. DALE, Secretary and Manager.
Offices, 24 WELLINGTON STREET, STRAND, LONDON, W.C. Telephone No. 2,610.

RANDALL'S BLACK CURRANT LOZENGES.

Plain Black Currant, old square	..	..	2 6
" " " rough oval	..	..	2 6
Black Currant and Ipecacuanha	..	..	2 6
Black Currant and Tannin..	..	..	3 0
Black Currant Voice (warm astringent)	..	..	3 0
Black Currant Cough Lozenges *	..	..	3 6

(* Ipecac. and Morph., strength as "B.P.")

In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size. From EDWARDS, London; through any Wholesale House; and from the Manufacturers,

RANDALL & SON, Southampton,

Who will forward Samples by post on application.

Also, BROWN COUGH LOZENGES, 2s.; 7 lbs. stamped with name free, and MUSK LOZENGES (Special), 2s. 6d.

N.B.—Medical Lozenges of every kind,

Including those of the Pharmacopoeia of the Hospital for Diseases of the Throat, London.

CHLORIDE OF GOLD

19/- per dozen
15-grain Tubes
(guaranteed);
Postage, 2d.

The best in the market. Immense quantities sold. Exported to all parts of the World.

LOUIS ROWLAND (Refiner),

59 South John St., LIVERPOOL.

SOAP AND OTHER BOXES,

Also Soft Wood Staves and Cask Heads,

FOR THE TRADE.

Imported from Norway, ready for nailing together, by

BANKS & RATCLIFFE, G16 Exchange Buildings, Liverpool.

PRICES ON APPLICATION.

C. W. FIELD,

MANUFACTURING CHEMIST,
SPICE, SEED, & DRUG GRINDER,

OFFERS:—

CAPSICINE

GINGERINE

SAPONINE

OIL OF CLOVES

ESSENCES.

FRUIT

AND

ETHERS

Address—Cambrian Mills, Wood Street, LIVERPOOL.

FOREIGN

MINERAL WATERS.

FREDERICKSHALL

25/- Case, 25 bts.; 40/- Case, 50 ½-bts.

APOLLINARIS WATER, 25/- Hpr., 50 bts.

39/- Hpr., 100 ½-bts.

"Carriage paid." Hampers free.

5 per cent. discount if 20 Hampers.

HUNYADI JANOS (10 Cases, 3/- and 5/- less),

30/- Case, 25 bts.; 50/- Case, 50 ½-bts.

SELTZER " " " 11/- Hpr., 25 bts.

" " " 15/- Hpr., 50 ½-bts.

FULLNA " " " 18/- Case, 20 bts.

" " " 30/- Case, 50 ½-bts.

VICHY " " " 31/- " 50 bts.

" " " 37/- " 50 ½-bts.

CARLSBAD " " " 37/- " 50 bts.

KISSENGEN " " " 42/6 " 50 "

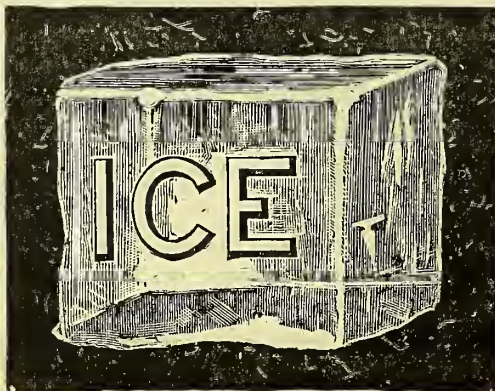
SCHWALLBACH " " " 27/6 " 50 "

HOMBURG " " " 40/- " 50 "

WILDUNGEN " " " 43/- " 50 "

CARLSBAD SALTS, ½-Bots., 20/- per doz.

½-Bots., 40/- per doz. Bots. 40/- per doz.



REGISTERED TRADE MARK.

NORWAY BLOCK ICE

FROM FINEST LAKES IN
CHRISTIANIA.

Professor Frankland's report with analysis:—
"The Ice is exceedingly pure, and contains less foreign matter than any water with which I am acquainted in this country."

Original Blocks
(2 to 3 cwt. each) 2s. 0d. per cwt.
1 cwt. to 2 cwt. .. 2s. 6d. per cwt.
½ cwt. to 1 cwt. .. 3d. per lb.
Under 1 cwt. 1d. per lb.

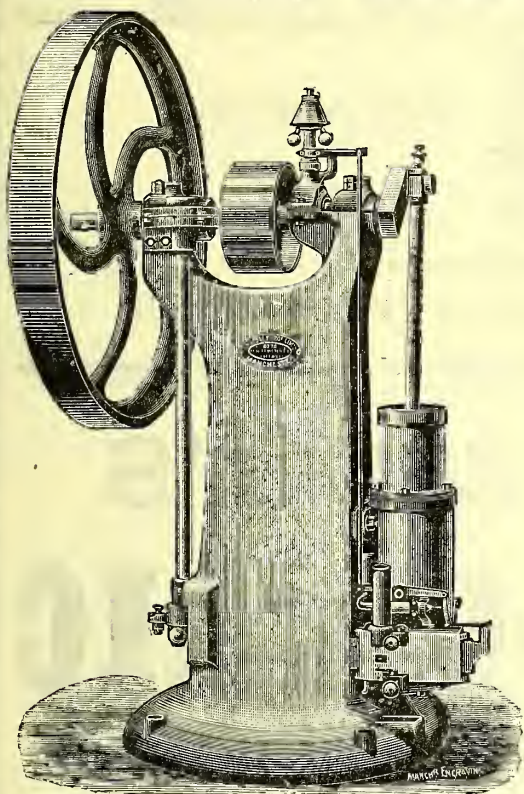
Packing free. Utmost promptitude in despatch.

W. B. HARRISON,

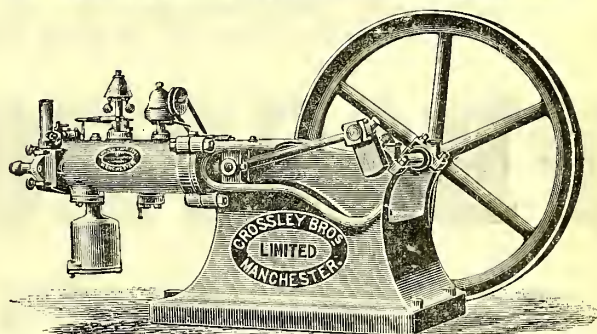
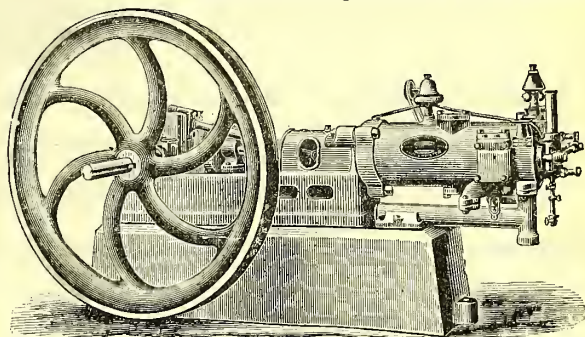
Importer of Ice and Mineral Waters,

6 BRIDGE ST., SUNDERLAND.

THE "OTTO" GAS ENGINE.



*Consumption of Gas 25 to 75 per cent. LESS
than in ANY other Gas Engine per Brake H.P.
About 200 Engines driving Aerated Water Machines*



OVER 15,000 IN USE.

29 Gold Medals. 35 Silver & Bronze Medals.

CROSSLEY'S NEW VERTICAL "OTTO" ENGINES.

Requiring very little ground space.

CROSSLEY'S PATENT SELF STARTER.

The Safest, Simplest, and Best.

CROSSLEY'S PATENT TWIN ENGINES.

Impulse every revolution. The steadiest running Gas Engine yet made.

THE ONLY GAS ENGINE WHICH RECEIVED A GOLD MEDAL AT THE PARIS ELECTRICAL EXHIBITION.

CROSSLEY BROS., LIM., OPENSHAW, MANCHESTER

London Office: 24 POULTRY, E.C.

Glasgow Office: 19 RENFIELD STREET.

TO MINERAL WATER MAKERS.

NO LIFE APART



FROM PHOSPHORUS.

By Royal Letters Patent. No. 7868, dated 17th May, 1884. ESILMAN & HASSALL, Patentees.

To Supersede Citric and Tartaric Acids for the Mineral Water Trade.

HASSALL & CO.'S PHOSPHO-CITRIC ACID.

Is recommended by the most eminent Physicians in Great Britain.

The Best Houses in the Trade have already adopted it.

It is thoroughly beneficial, and far better suited to the requirements of the Mineral Water Trade; it is free from lead and all other minerals and cheap acids; it is fully £3 per cwt. cheaper than Citric and Tartaric Acids, which mostly contain lead.

WE COMPETE ON QUALITY AND PRICE.

YORK ROAD, KING'S CROSS, LONDON, N.

PHOSPHO-CITRIC ACID.

THE PATENTEES CLAIM FOR IT, AMONGST OTHERS, THE FOLLOWING ADVANTAGES:—

- 1st.—That there is no risk of prosecution, and consequent ruin of business, for lead contamination.
- 2nd.—That it does not deteriorate by exposure, and will retain all its properties any length of time.
- 3rd.—The price is only 10*d.* per lb. in 9 and 18 gallon casks; if in smaller quantities, 1*s.* per lb.
- 4th.—It is now an established fact that the beverages made with this acid far excel all others in keeping properties, as there is not the fungoid growth that there is with other acids.
- 5th.—The Essences retain their strength to a greater degree.
- 6th.—A thoroughly clear and pure beverage is obtained, whilst a greater “body” and more fruity character is imparted.
- 7th.—Time and labour saved. Being in liquid form, requires only to be measured and added direct.
- 8th.—It is entirely free from Sulphuric, Hydrochloric, Nitric, Acetic, or other cheap Acids.
- 9th.—It does not affect the metal pipes to the same extent that Citric and Tartaric Acids do.

3-oz. Sample will be sent on receipt of postage (3 stamps), or 14 lbs. will be sent on approbation.

DIRECTIONS FOR USE.

Use 2-oz. measure to each gallon of Syrup; if not exact to palate, a little more or less (as the case may be) will produce a beverage equal to the greatest anticipation; can be added to hot or cold syrup, but mostly used cold—an obvious advantage.

Casks should be emptied, as soon as convenient, into bottles or an open earthenware tank (with a cloth thrown over to keep the dust out); the last pint to be filtered through a woollen or felt cloth. There is no loss or deterioration from exposure.

Metal must not be used either for tap or measuring purposes. Vent holes must be bored into the bung; if bored into the cask, a new stave will be charged for.

THE WORLD'S GREATEST AUTHORITIES ON THE PHYSIOLOGICAL EFFECTS OF PHOSPHO-CITRIC ACID.

Mr. Hassall personally waited on ten of the most eminent physicians in London (including the Physician in Ordinary to Her Majesty) as to the relative merits of Phospho-citric as compared with citric and tartaric acids. The decision was unanimously in favour of the former on account of its freedom from lead. Their names were obtained from the London Hospital.

The following is taken from the "ANALYST," the medium of communication between public analysts, for September, 1884:

PHOSPHO-CITRIC ACID,

A Preparation to supersede Citric and Tartaric Acids in Mineral Waters.

Citric and tartaric acids have long been used for acidulating or giving to mineral waters their acid flavouring, but these acids have certain disadvantages, inasmuch as their solutions cannot be kept for any great length of time without the formation of a fungoid growth, and also the extreme difficulty of obtaining them free from lead.

A solution has recently been offered to the trade called Phospho-citric Acid, intended to supersede citric and tartaric acids in mineral waters, a sample of which I have lately received, the composition of which, I have no doubt, will interest analysts.

Poisonous metals were entirely absent, and so were free sulphuric, hydrochloric, nitric, and acetic acids. The solution was clear and colour-

less. According to the proportions instructed to be used, the quantity of phosphoric acid in a small bottle (half pint) will amount to 0.95 grain, which I found to be the case in a sample of lemonade made with the above. The flavour and appearance were quite as good as that made with the organic acids.

Seeing that Phosphoric Acid has been largely used, and appears to be highly valued for raising bread and pastry, and that it is recognised as an important medicinal constituent to the system, there is no reason why this article should not be used in this highly diluted form as the acid flavouring of lemonade and other mineral waters.

JAMES NAPIER'S

The sample consisted of a liquid, clear and colourless. I examined the samples, for poisonous metals, especially arsenic, lead, and copper, but could not find the slightest trace. Free sulphuric, hydrochloric, nitric, and acetic acids were also absent; indeed no free acid exists but phosphoric and citric. From analysis and careful examination, I am of opinion that, as an article to supersede tartaric and citric acids in mineral waters, Phospho-citric is in many respects superior to those acids. As is well known, it is almost an impossibility to obtain tartaric and citric acids free from lead, so that this article, having no metallic combination, is purer than those acids. Phosphoric Acid having been largely used and highly valued as a substitute for tartaric acid in the raising of bread and pastry, and as it is also present, in combination with lime, potash, iron, etc., forming the principal constituent of certain aerated waters of the Zoedone class, I see no reason why the use of phosphoric acid, in a highly diluted form, will not prove beneficial and be much more superior to tar-

REPORT. July 30, 1884.

tanic and citric acids. As phosphoric acid is a necessary constituent of the body, whilst tartaric and citric are entirely absent, it is certainly an advantage to use it, as it supplies a very important ingredient to the system and one which is too often obtained in insufficient quantities. I have also examined the lemonade prepared from the above, bottled by one of the first firms in Northampton, and find it to contain 0.95 grain of phosphoric acid in each bottle. The lemonade was entirely free from metallic contamination and fungoid growth, had a bright appearance, was particularly clear, and had a very agreeable flavour. I have no doubt but Phospho-citric Acid will be much used, as it is well suited for its intended purpose, *i.e.*, to supersede citric and tartaric acids in mineral waters.—JAMES NAPIER, F.C.S., F.I.C., Public Analyst, London.

DR. HASSALL'S REPORT.

The Analytical Sanitary Institution, 54 Holborn Viaduct,
London, E.C., June 25, 1884.

Having submitted to analysis a sample of Phospho-citric Acid, patented and manufactured by Messrs. Hassall & Co., we find it to be entirely free from lead and other metallic impurities. Free sulphuric, hydrochloric, and acetic acids were also specially tested for, and found to be absent.

The solution was clear, colourless, and, when sufficiently diluted, possessed an agreeable flavour.

It is evident from the foregoing particulars that this preparation is well suited to supersede tartaric and citric acids

commonly employed in the manufacture of acidulated and aerated waters, while in its cheapness, freedom from metallic contamination, and in the circumstance that it would tend to preserve beverages made with it for a greater length of time (as there would be less tendency to the development of the fungoid growth frequently observed when the ordinary acids have been used), the Phospho-citric Acid of Messrs. Hassall & Co. offers very considerable advantages.

ARTHUR HILL HASSALL, M.D.,

Author of "Food: its Adulterations and Methods for their Detection."

The above is also confirmed by EDWIN GODWY CLAYTON, F.C.S., etc.

PROFESSOR JUSTUS VON LIEBIG,

Equally well known in England and Germany. In his Familiar Letter on Chemistry, in its relation to Physiology, Dietetics, etc., etc., 4th edition, pp. 408-9 states, "The significance and importance of phosphoric acid in the vital process is obvious, when we remember that this acid is a never failing ingredient of all the organised structures of the animal body. The substance of muscular fibre, the fibrine of the blood, the pulmonary tissues, the liver and the kidneys contain an amount of phosphoric acid in chemical combination. The ashes or incombustible ingredients of the fluids of the flesh are in all animals of the same nature and quality. They consist of alkaline phosphates, phosphate of lime, and phosphate of magnesia. The bones of the vertebrata contain more than half their weight of phosphates of lime and

magnesia. The substance of the brain and the nerves contains a phosphoric acid, coupled with a fat, or with a fatty acid, the phosphoric acid being partly in combination with an alkali. The phosphoric acid contained in these tissues is derived from the blood. The blood contains under all circumstances a certain amount of phosphoric acid. In the present state of science it is not yet possible to express a decided opinion as to the mode of action of the phosphoric acid in the organic process, and we must for the present be satisfied with deducting, from its constant presence in all the juices and organised tissues of the body, the conclusion that it is indispensable for the vital operations.

DR. WILLIAM B. CARPENTER

In his Standard Manual of Physiology, 3rd edition, p. 272. "Phosphorus exists also in combination with albuminoid compounds, in all animal substances composed of these, and in the state of phosphate, combined with lime, magnesia, and soda: it exists largely in many vegetable substances ordinarily used as food." And on page 242, "The proportions of phos-

phorus in the brain is considerable, being from 8 to 18 parts in 1,000 of the whole mass, or from 1-20th to 1-30th of the whole solid matter. It seems to be unusually deficient in the brains of idiots."

Extract from a "Leading Article," written by the Editor of the "Mineral Water Trade Review," June 18, 1884.

"Having personally inspected and tested this new product at the large factory of Mr. R. Mayer, of Clerkenwell, we can speak highly of it, and can endorse, so far as our judgment goes, the opinions of the patentees as to its merits. Both Mr. Mayer and his manager agree in their good opinion of Messrs. Hassall & Co.'s speciality, the strongest proof of their approval lying in the fact that they are now using it exclusively, and it is giving their customers satisfaction. Mr. Mayer's lemonade, made with the new acid, had all the pleasant acidity and flavour of ordinary citric, and was remarkably clear, bright, and sparkling.

"There will be, no doubt, a happy future for the patentees of this product."

Testimonial from one of the largest firms in Australia.

125 Lonsdale Street West,
Melbourne, June 11, 1885.

Gentlemen,—We have tried the Phospho-citric Acid and have much pleasure in pronouncing it a decided success.

It is free from any objectionable flavour or taint, and, being in liquid form, is a great boon, as the time and trouble in weighing and dissolving the other acids is a consideration in the busy time. We consider all aerated-water makers will find it greatly to their advantage to adopt the use of it.—Yours sincerely,

R. O'DONNELL & CO.

From one of the largest Mineral Water Manufacturers in the World.

216 Kingsland Road, London,
May 14, 1885.

Gentlemen,—Having used your acid for the last three months, we have every reason to be satisfied with it.—Yours truly,

BATEY & CO.

From some of the oldest, best, and most respected firms in London.

46 Myddelton Street, London, E.C.,
August 20, 1885.

Gentlemen,—After fifteen months' continuous use of your acid, we have much pleasure in testifying to its excellence. We find it possesses all the properties required by us for our trade, and is at the same time a great saving in time and expense.—Yours respectfully,

R. MAYER & SONS.

2, 3, & 4 Rose Lane, London, August 18, 1885.

Gentlemen,—We have now been using your Phospho-citric Acid over fourteen months, and have much pleasure in stating that we like it very much. It is certainly easier to work with than citric and much cheaper. We can find no fault whatever with it.—Yours truly,

THE CRYSTAL MINERAL WATER CO.

Catherine Street, Strand, May 7, 1885.

Gentlemen,—We have much pleasure in stating we have used your Phospho-citric Acid for several months, and find it a great improvement to the flavour of the lemonade, etc., also about 70/- per cwt. less than citric acid crystals. It is also a great boon in the saving of time, as it is always ready for instant use.—We are, yours respectfully,

W. R. LISTER & CLEMOW.

Kennington Park, London, May 6, 1885.

Gentlemen,—Please forward another cask of Phospho-citric Acid at once. Having used your acid for the last three months, we have much pleasure in informing you that it has given us every satisfaction, producing a better article, with considerably less cost and labour.—We are, yours faithfully,

CLAYTON BROS.

Archdale St., Syston, Leicester, August 11th, 1885.

Dear Sirs,—We find your acid first class, at the same time being cheap.

THE NEUROGENE COMPANY, LD.

From the Provinces.

Newcastle-on-Tyne, August 28, 1885.

Gentlemen,—I have now been using your Phospho-citric Acid for a considerable time, and have much pleasure in saying that it is the best and most economical article for the purpose I have met with. In my opinion it is far superior to the ordinary acids, producing a better beverage, and far easier to manipulate.—Yours truly,

W. GLENDINNING.

Mineral Water Manufactory,
Blackburn, August 26, 1885.

Gentlemen,—I have tried the Phospho-citric Acid for acidifying purposes and found it quite satisfactory, answering the purpose quite as well as citric or tartaric acids.—Yours respectfully,

JAMES LAW.

Chester, August 12, 1885.

Gentlemen,—We have received the cask of Phospho-citric and have given it a fair trial; it gives us every satisfaction.—Yours truly,

PARKER & CLEGG.

Cathay, Bristol, August 26, 1885.

Gentlemen,—I have used your Phospho-citric Acid daily for the last ten months with a rapidly increasing business, to the satisfaction of my customers and profit to myself, being only about half the cost of the other acids and ready for instant use. It gives me every satisfaction.—Yours respectfully,

C. E. BEAVIS.

The Hampshire Mineral Water Works,
Millbrook Road, Southampton, August 10, 1885.

Gentlemen,—We like your acid very much indeed; kindly forward another at your earliest convenience.—Yours truly,

HINE & TRESTRAIL.

Low House Brewery, near Bradford,
March 13, 1885.

Gentlemen,—We enclose cheque. The acid suits well. Cask returned, please refill.—Yours,

J. & H. S. HIRST.

3 Sussex Street, Blyth, November 12, 1884.

Gentlemen,—I am happy to inform you that I have tried your Phospho-citric Acid, and I find it quite as good as you represent it to be. It saves labour, and is little above half the price of citric and tartaric acids. The cask I ordered last week is to hand—I remain, yours respectfully,

THOMAS FORSTER,

Penrith, June 17, 1885.

Dear Sirs,—I am very well pleased with your acid, and trust you will have a rapidly increasing demand for it.—Yours respectfully,

J. B. THWAITES.

Soda Water Works, Liskeard, July 21, 1885.

Gentlemen,—I beg to enclose you herewith cheque for £6. Your Phospho-citric Acid has given me great satisfaction.—Yours faithfully,

J. W. PARKER.

Extracts from Testimonials.

North Tawton, Devon, June 10, 1885.

Gentlemen,—Your acid is all I could possibly desire in every respect.—Yours truly,

L. W. DAY.

Markgate Street, Dunstable, June 11, 1885.

Dear Sirs,—I am pleased to say I like your acid very well and am using no other. Wishing you every success.—I am, gentlemen, yours faithfully,

JOHN HEALEY.

The Church Stretton Aerated Water Co.,
July 2, 1885.

Dear Sirs,—We have every reason to be satisfied with it.—Yours truly,

J. H. WILLIAMS.

SCORES OF TESTIMONIALS MAY BE SEEN AT ANY TIME.

SOLE AGENTS FOR AUSTRALIA AND NEW ZEALAND:

LAWRENCE & O'FARRELL, 86 Queen Street, MELBOURNE.

HERBERT RAYMOND, 26 Exchange, Pitt Street, SYDNEY.

HASSALL & CO.,

No. 1 WAREHOUSE, GT. NORTHERN
GOODS DEPOT, KING'S CROSS,

LONDON.

1878



GOLD MEDAL — AMSTERDAM 1883

1867

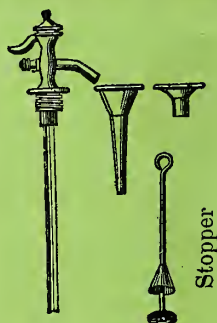
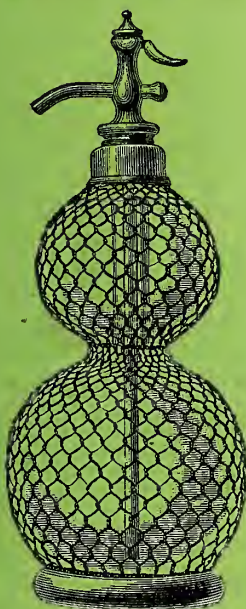


GUÉRET FRÈRES

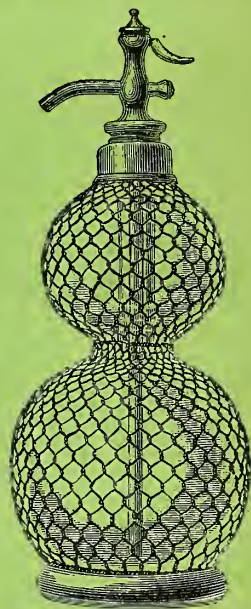
ENGINEERS AND PATENTEES

PARIS — 72, boulevard de la Gare, 72 — PARIS

SIPHON TABLE APPARATUS



Stopper



With this apparatus, simple and easy to fill, Aerated waters, Lemonades and sparkling wines can be made instantly.

INSTRUCTIONS

1. Unscrew the top piece, that is the tap, put in the long funnel and fill the lower division with water.
2. Put the stopper upon the inside tube. Take the two packets of powder (one blue and one white) and put them into the upper division, using the short funnel, then replace the top and screw it up tight.
3. Incline the apparatus, so that the water in the lower part may run into the upper one, filling it about one third, so that it may dissolve the powders.
4. Shake the apparatus giving it a circular motion and keeping it upright so that the gas may thoroughly mix with the liquid.

NOTE. — Always use granulated acid and as soon as the powders commence to dissolve, let out any air there may be in the apparatus, by pressing upon the lever.

PRICE

1 Bottle size	10 fr.	100 charges for 1 Bottle size	12 fr.
2 —	12	2 —	15
3 —	15	3 —	20
4 —	18	4 —	»
5 —	21		

WHOLESALE DISCOUNT

1878



GOLD MEDAL — AMSTERDAM 1883

1867



GUÉRET FRÈRES

ENGINEERS AND PATENTEEES

PARIS — 72, boulevard de la Gare, 72 — PARIS

GAZOSELTZ APPARATUS

Fig. 1



Fig. C



Tube

Fig. 2



Funnel

With this apparatus, Aerated waters, Lemonades and sparkling wines can be made instantly.

INSTRUCTIONS

1. Fill the bottle, figure 1, entirely with water.
2. With the funnel put into the part, figure 2, the two powders (blue and white).
3. Place the tube firmly into the neck of figure 2.
4. Screw firmly the figure 2, upon the figure 1.
5. Replace the apparatus, upon its foot as shown in figure C.

Thus placed the apparatus works itself; at the end of a quarter of an hour the water is sufficiently aerated. Sparkling wines can be made by replacing the water with wine to which 8 to 12 ounces of powdered sugar candy has been added.

PRICE

1 Bottle size	12 fr.	100 charges for 1 Bottle size	10 fr.
2 —	15	2 —	15
3 —	18	3 —	20
4 —	25	4 (2 charges of two bottle size).	
6 —	30	6 (6 — three —).	

Take the apparatus to pieces for packing

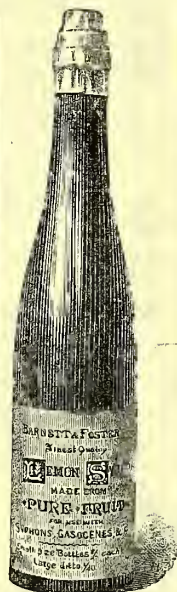
WHOLESALE DISCOUNT

SYRUPS FOR ICED FRUIT DRINKS

FOR DISPENSING FROM THE SYPHON OR GASOGENE.

The following Syrups are specially prepared for use with the Pillar Fountain or the Syphon Bottle, and are kept in stock and can be forwarded same day as order received:—

Lemon
Orange
Ginger
Pineapple
Pear



Raspberry
Strawberry
Cherry
Currant

Supplied in two-sized Bottles, handsomely yet neatly "got up," for retailing at 1s. and 1s. 10d. each.

Discount to the Trade for cash with order, 25 per cent.

OBSERVE!!! It is advisable to cultivate a trade in Syphons when filled with mineral waters only; it pays better; the frothy heading produced when saccharine drinks are emptied from syphons is well known. The drink is much nicer when the syrup is poured into the tumbler and the aerated water drawn on to it. This system of dispensing iced fruit drinks should be in the shop of every Chemist and Druggist; a small side counter being devoted to this purpose during the hot season. An immediate profit is made, with the prospect of orders for both syphons and syrups for the residence of customers.

We unhesitatingly affirm that the "London Made" Syphon (title registered) is the most perfect of any in the market; the latest improvement in the foot being very much appreciated, as it prevents the drips from the spout soiling the table.

This Syphon obtained in competition, the Highest Award at the International Health Exhibition, London, 1884.

(See opposite page for further particulars.)

Send for Illustrated Catalogue of Soda Water Machinery and all accessories to

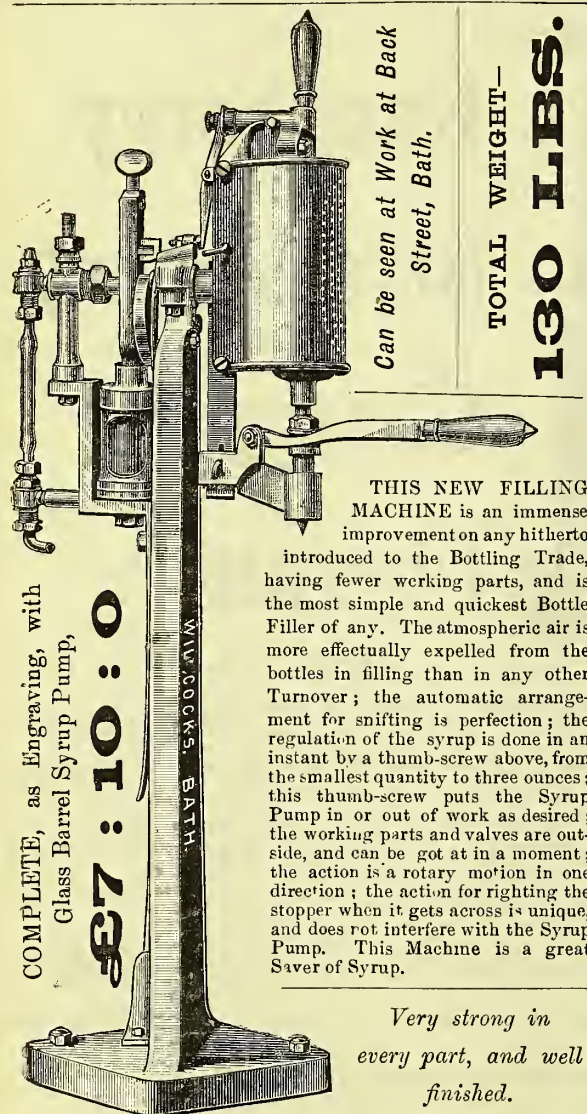
BARNETT & FOSTER,

Aerated Water Engineers, Manufacturing Chemists, and General Providers
to the Mineral Water, Wine, Beer, and Cyder Trades,

"NIAGARA WORKS," 26^T EAGLE WHARF ROAD, LONDON, N.

WILCOCKS'

NEW REGISTERED DESIGN AND PATENT
APPLIED TO
TURNOVER FILLING MACHINE
FOR FILLING INTERNAL STOPPER BOTTLES.



THIS NEW FILLING MACHINE is an immense improvement on any hitherto

introduced to the Bottling Trade, having fewer working parts, and is the most simple and quickest Bottle Filler of any. The atmospheric air is more effectually expelled from the bottles in filling than in any other Turnover; the automatic arrangement for snifting is perfection; the regulation of the syrup is done in an instant by a thumb-screw above, from the smallest quantity to three ounces; this thumb-screw puts the Syrup Pump in or out of work as desired; the working parts and valves are outside, and can be got at in a moment; the action is a rotary motion in one direction; the action for righting the stopper when it gets across is unique, and does not interfere with the Syrup Pump. This Machine is a great Saver of Syrup.

Very strong in every part, and well finished.

We have laid down Special Additional New High-Class Machinery to meet the increased demand for our Goods.

N. G. WILCOCKS,
SOLE MAKER AND VENDOR,
BATH, SOMERSET.

N. G. WILCOCKS, BATH. AERATED WATER MACHINERY.

READ THE SUBJOINED TESTIMONIALS.

Battersea, London, 4th February, 1885.

DEAR SIR,—I have much pleasure in sending you a testimonial as to your make "Favourite" Soda Water Machine, as supplied to my order about 2½ years ago. It has given me every satisfaction, and has always done its work well; has cost nothing for repairs, because none were required. The waters are highly gaseous, and the machine produces goods in the highest state of perfection. Your Dial Pressure Gauge does you great credit, as it does not get out of order. Being an old-established Mineral Water Manufacturer, I offer my opinion with some confidence.

You may publish this if you think fit.

Yours truly, T. HICKS.

To Mr. WILCOCKS, Bath.

Aërated Water Works, Howden, Yorks.,
February 10th, 1885.

Mr. N. G. WILCOCKS, Engineer, Back Street, Bath.

DEAR SIR,—I have pleasure in hearing testimony to the excellent workmanship of your machinery. Four years since I had an Aërating Machine and "Eclipse" Bottler, and also a small Engine and Boiler, all of which continue to work to my satisfaction. I may add that, with the exception of the Engine and Boiler, we put the machinery up ourselves.

You are at liberty to make what use you like of this.

Yours truly, ROBT. BRIGGS.

Princes End, Tipton, February, 1885.

To Mr. N. G. WILCOCKS, Bath.

From BAYLIS, THOMPSON & Co., Aërated Water Manufacturers.

DEAR SIR,—We have great pleasure in stating that the Aërated Water Machinery you supplied us with two years ago continues to work well, and gives us every satisfaction.

Yours truly, BAYLIS, THOMPSON & CO.

January 24th, 1885.

From COPELAND & TURNER, Portland Mineral Water Works, 9 Upper Market Square, Hanley.

To Mr. WILCOCKS, Bath.

DEAR SIR,—I have much pleasure in testifying to the excellency of the Machinery supplied to us by you. We have now had it in use for two years, and it has given entire satisfaction.

Yours respectfully, COPELAND & TURNER.
J. COPELAND.

Range Road, Denton, Gravesend, Kent,
February 5th, 1885.

DEAR SIR,—Having purchased of you a Soda Water Machine and Engine and Boiler, I am happy to say they have given me great satisfaction, and are all I could have desired; they have been greatly approved of by my many friends. You may print this if you please.

Yours respectfully, STEPHEN ALLEN.

Mr. WILCOCKS, Engineer, Bath.

Southsea Steam Mineral Water Works,
Middle Street, January 30th, 1885.

To Mr. WILCOCKS, Bath.

SIR,—Your Turnover Filling Machine is still working admirably, and appears as good now as when I first had it. It is really the best filling machine for quickness and ease of working I ever had.

Yours truly, T. MARTIN.

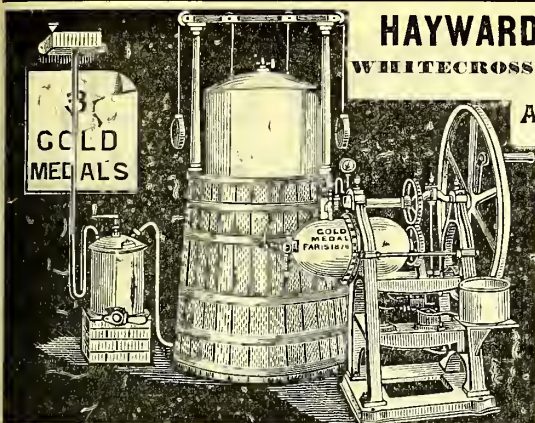
Holland Street, Brixton, London, S.W.

From ROE & MERCHANT, Aërated Water Manufacturers.

To Mr. WILCOCKS, Engineer, Back Street, Bath.

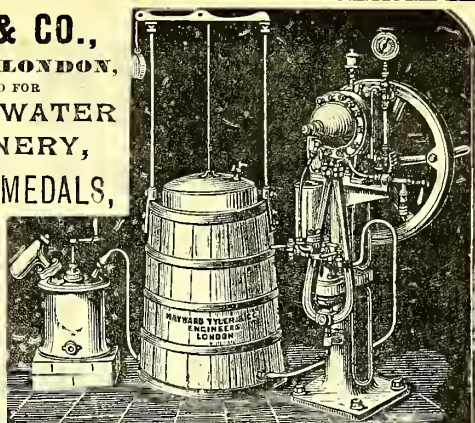
DEAR SIR,—Your favour to hand. We are pleased to say that the large Double Soda Water Machine that we purchased from you three years ago has been in constant work ever since. It has given us every satisfaction. In fact, we have never had the slightest trouble with it, and it turns out a first-class Aërated Water.

We remain, dear Sir, yours truly, ROE & MERCHANT



HAYWARD TYLER & CO.,
WHITECROSS STREET, LONDON,
WERE AWARDED FOR
AERATED WATER
MACHINERY,
3 GOLD MEDALS,

PARIS,
1878.
LONDON,
1884.
CALCUTTA,
1884.



VALLET'S PATENT IMPROVED STOPPERED BOTTLES,

For Mineral Waters and Gaseous Liquids,
Are now used by upwards of 1000 Soda Water Manufacturers
in the United Kingdom.

PRICES (Per Gross).—Patent Stopper, as per Fig. 1, 4/6; ditto, as Fig. 6, 4/6; ditto, as per Fig. 7, 4/6; Patent Stoppered Bottles, ready for use; ditto Half Bottles, ditto; Patent Unstoppered Bottles; ditto Half Bottles; Fig. 9. Boxwood Bottle Openers, polished, 2/6; ditto, fitted with rubbers, 10/6; Common Wood Bottle Openers, 5/6; ditto, fitted with rubbers, 7/6; Fig. 10. New Bottle Opener, 6/-.

ROYALTY FREE.



Fig. 2.



Fig. 6.



Fig. 7.

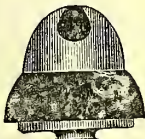


Fig. 10.

It will be seen by reference to figs. 6 and 7 that I now form a button or nut under the base of my Stopper for the purpose of easily extracting same from the Bottle without spilling or removing the indiarubber from the body of the Stopper. This is readily accomplished by the use of a suitable tool made to fit on the nut; the Stopper being grasped is withdrawn from the bottle in a second, without injury to the Stopper.

Therefore, it will be a great saving to Mineral Water Manufacturers, as by the old way of extracting the Stoppers from the Bottle, when necessary, very often the indiarubber is spoiled, and the time it takes by this slow process is worth more than the Bottle itself; so that in many instances Bottles with spoiled or dirty Stoppers are put aside as worthless stock.

Figs. 1 and 6 Stoppers, when invoiced without Bottles, are ready fitted with the rubber washer on, and are easily inserted into the Bottle by the simple pressure of the thumb, the washer at the same time folding in the hollow part of the stem, when passing into the Bottle. They are the only Stoppers which require no tool to fit into the Bottle; and when a Bottle breaks, which seldom occurs, the Stoppers are always fitted with washer and ready to be inserted in a new Bottle. Therefore they are the most durable and inexpensive Stoppers in the Trade.

Sample and Particulars sent on application to

L. VALLET, 49 EVERTON RD., LIVERPOOL.

KRONENQUELLE

CROWN SPRING (Registered).

THE NEW NATURAL MINERAL WATER for the Treatment of DISEASES of the KIDNEYS & BLADDER.
SPECIFIC FOR GOUT.

This Natural Lithia Spring, although only recently brought before the Medical Profession, has gained a high reputation on account of its quick and decided action even in most obstinate cases. The KRONENQUELLE, although of a nice and palatable taste, is neither a table water nor an aperient. **KEEPS WELL IN ANY CLIMATE.**

Through all Wholesale and Export Houses, or from the

Sole Consignees: W. SCHACHT & CO., 26 Finsbury Pavement, London, E.C.

CAUTION.—Messrs. W. SCHACHT & CO. beg to inform the Trade generally that all cases are labelled "KRONENQUELLE (Registered together with their name and address printed in BLUE INK."

"The National Table Waters."

"ABSOLUTELY PURE."

ELLIS'S
RUTHIN
WATERS.

REGISTERED.

ESTABLISHED 1825.

Soda, Potass, Seltzer, Lemonade, Aromatic Ginger Ale.
For Gout: Lithia Water, and Lithia and Potass Water.

ASK FOR ELLIS'S.

SOLD EVERYWHERE.

SOLE ADDRESS—R. ELLIS & SON, RUTHIN,
NORTH WALES.

London Agents: W. BEST & SONS, Henrietta Street, Cavendish Square,

T. & F. J. TAYLOR'S



AERATED WATERS,
Newport Pagnel.

ESTABLISHED 1835.

SODA, POTASH, SELTZER, AERATED (without
Alkali, and LITHIA WATERS,
LEMONADE AND GINGER ALE.

Each Bottle is protected by a Label bearing the Signature of the Firm.

Purity and Excellence of the Water certified by Analysis
by Professor ATTFIELD, Ph.D., F.C.S.

GUÉRET FRÈRES,

Mechanical Engineers, privileged in France and Abroad,

72, BOULEVARD DE LA GARE, PARIS.

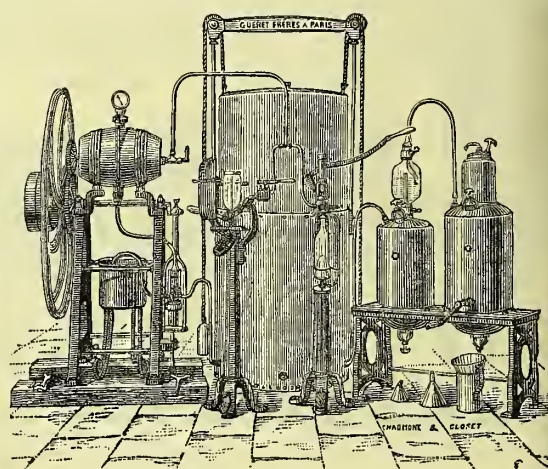
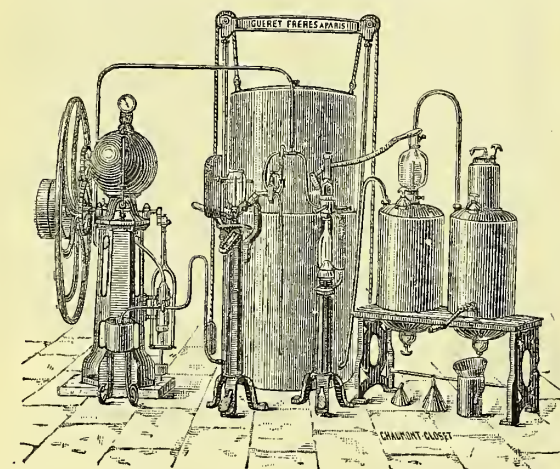
GOLD MEDAL, AMSTERDAM, 1883.

PLANT & SYPHONS FOR THE MANUFACTURE OF AÉRATED BEVERAGES,

WITH ALL THE LATEST IMPROVEMENTS.

COMPLETE CONTINUOUS APPARATUS, SPHERICAL OR PEAR-SHAPED.

The Saturator is of brass, guaranteed free from every defect in construction and perfect in action, tested at high pressure, combining economy with the greatest sanitary security, and enjoying an unrivalled reputation.



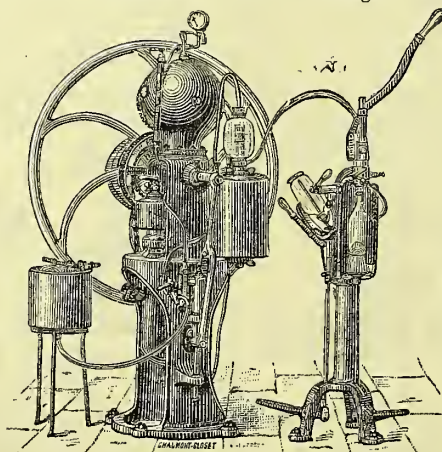
SYPHONS

With small levers, fittings of metal of highest quality, and best glass.



CONTINUOUS APPARATUS

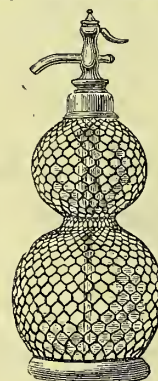
For the automatic generation of carbonic acid gas, the only practical system applicable to the manufacture of Aërated Beverages.



GAZOSELTZ

For the instantaneous production of Aërated Beverages at table.

Any one can use them.



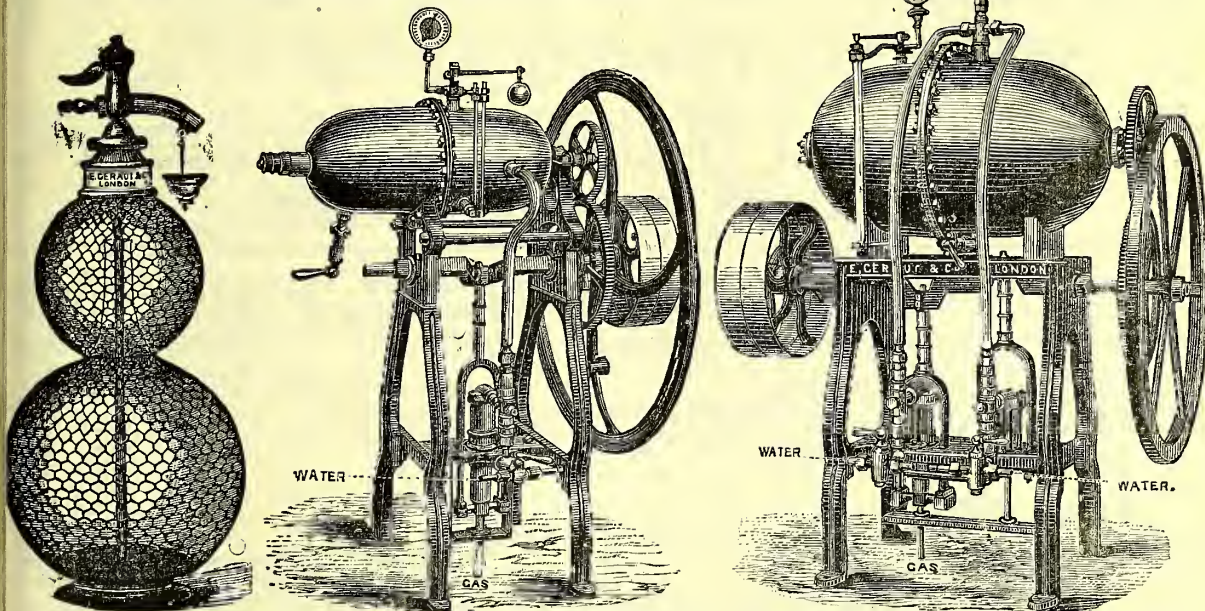
FULL PARTICULARS AND GENERAL CATALOGUE SENT ON APPLICATION.

EUGENE GERAUT & CO.,

PATENTEES AND MANUFACTURERS OF

Soda-Water Machines, Filling Machines, Syphons, Seltzogenes, &c.

SEND FOR CATALOGUES FOR PARTICULARS AND PRICES.



IMPROVED PATENT

LEVER SELTZOGENES

FIRST INTRODUCED BY EUGENE GERAUT IN 1853,

For the immediate production of Eau de Vichy,
Soda Water, Sparkling Lemonade, and
Aërated Waters.

WHOLESALE PRICES AS FOLLOW :

3-Pint Wire ..	13/0	3-Pint Cane ..	13/6
5 " " ..	18/0	5 " " ..	19/0
8 " " ..	30/0	8 " " ..	32/0
3-Pint Size, strongly Silver Plated, richly Decorated, Porcelain Stand	30/0		
5-Pint ditto	ditto	..	38/0
8-Pint ditto	ditto	..	48/0

IMPORTANT NOTICE.

For orders of Three, 15% ; large discount allowed
off quantities upwards. Strongly Silver-plated
Top, 5/ extra.

POWDERS FOR THE ABOVE.

	12 Charges.	10 Charges.
	Per doz.	Boxes.
3-Pint Size, in Handsome		
Labelled Boxes ..	21/0	18/6
5-Pint ditto ditto ..	30/0	26/0
8-Pint ditto ditto ..	51/0	44/6

LIBERAL DISCOUNT.

*Illustrated Catalogues on application.*In ordering our Seltzogenes through firms distinctly state that you require our celebrated name,
EUGENE GERAUT & Co., marked on the metals.

IMPORTANT NOTICE.



MESSRS. E. GERAUT & CO. (the first introducers and manufacturers of Syphons in England 35 years ago) have much pleasure in informing their numerous customers, and the trade generally, that in order to maintain their position as the Premier Manufacturing Firm of Syphons in the World, they have now finished most extensive alterations and additions to their premises, as well as a New and Complete Factory for the manufacture of Glass Vases of the best and purest description. Messrs. E. GERAUT & CO. confidently request their customers, and the public generally, to compare their Syphons with any other make at present in the market, feeling assured that for excellent finish, efficiency, and artistic appearance they are second to none in the trade, and the large and increasing demand of late years experienced fully and authoritatively demonstrates the superiority of their make of Syphons over those manufactured by younger firms in this branch of the trade. Messrs. E. GERAUT & CO. are therefore in a position to undertake orders of the largest magnitude for their justly celebrated Syphons, which are well known at home and abroad for their safety, simplicity and elegance, and they beg to state, to ensure punctuality and despatch, they shall be very happy to hook orders in advance, always guaranteeing the best workmanship and materials. The tops are guaranteed to be manufactured of pure block tin, and are most carefully finished, and every Syphon, previous to being sent out, is tested at a very high pressure.

WHOLESALE PRICES: Long and Short Levers, Oval, Cylindrical, Octagonal, and
Diamond, 22/6 per dozen for quantities of ONE GROSS.
SAMPLES AND CATALOGUE ON APPLICATION.**OUR ONLY ADDRESS IS—139 & 141 FARRINGDON ROAD, E.C.**

IDRIS & COMPANY,

MANUFACTURING CHEMISTS,
Pure Mineral Water Manufacturers,
SYPHON AND SELTZOGENE MAKERS.

BEST GOODS. BEST PRICES.

Lime Juice Cordial	7/6	per dozen.	} Reputed Quarts.
Limetta Cordial	...	...	...	...	7/6	,,
Palatable Lime Juice	...	...	...	...	9/	,,
Fruit Cordials	...	...	...	...	9/	,,

(ABOUT THIRTY VARIETIES. LIST FREE.)

PURE LIME JUICE.

PURE LEMON JUICE.

NATURAL FRUIT ESSENCES.

SOLUBLE ESSENCE OF LEMON.

SOLUBLE ESSENCE OF JAMAICA GINGER.

(THE BEST ARTICLE EVER OFFERED.)

Sparkling Phosphade

The original preparation containing Hypophosphites as certified by Professor Attfield.

THE MOST AGREEABLE OF ALL THE PHOSPHATIC DRINKS AND THE BEST SELLING ARTICLE.

PATRONISED BY THE PRINCE OF WALES.

The attention of the Country Chemists is specially requested to our goods, as Stores, Grocers, and other cutting shops are not supplied, and Sole Agencies are arranged for small towns.

IMPROVED SELTZOGENES.

20 per cent. off usual list prices.

ELEGANT & DURABLE SYPHONS.

IDRIS & CO.,

ASCHAM STREET, KENTISH TOWN, LONDON, N.W.

SODA-WATER MACHINERY

SPECIAL NOTICE.

BRATBY & HINCHLIFFE have pleasure in introducing to the TRADE their

NEW "CHEMISTS'" SODA-WATER PLANT.

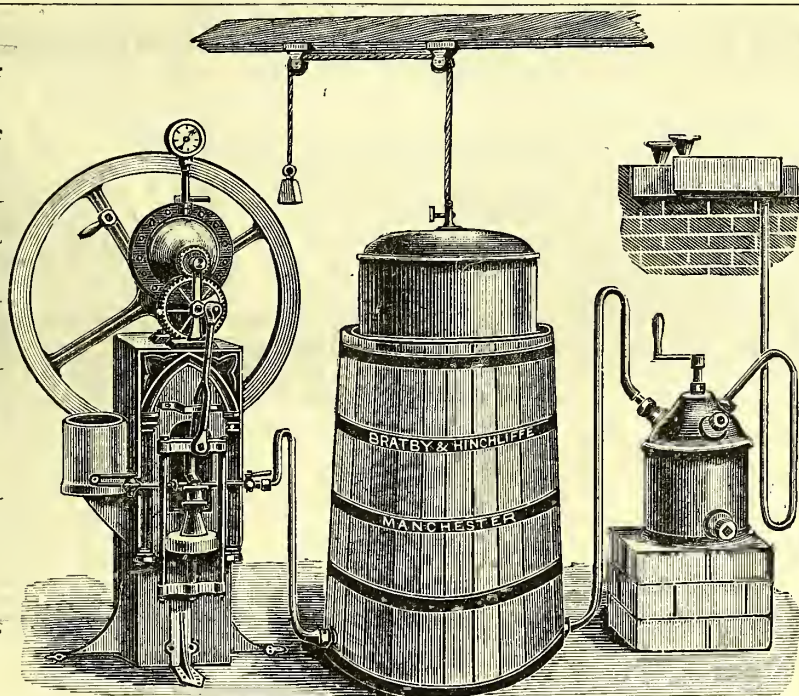
Makes all the popular
Aërated Beverages.

Can be started at a
minute's notice.

Suitable for Export.

Cheapest and Best
Soda-water Plant
in the Market.

Specially made for
"Chemists."



Guaranteed to pro-
duce pure high-class
Aërated Waters.

Full Instructions to
Manufacture all kinds
of Aërated Waters are
given with each Plant.

Capable of manufac-
turing 100 doz. full-
size bottles of Aërated
Waters per day.

PRICE: "Chemists'" Soda-water Plant complete, £28.

Specially designed for Chemists, Hotel-keepers, and Regimental Messes. BOTTLING MACHINES, £8 extra.

EVERY REQUISITE

FOR AN AERATED WATER MANUFACTORY SUPPLIED.

WRITE FOR ILLUSTRATED CATALOGUE, FORWARDED FREE.

BRATBY & HINCHLIFFE,

SANDFORD STREET, ANCOATS, MANCHESTER, and
146 MINORIES, LONDON, E.C.

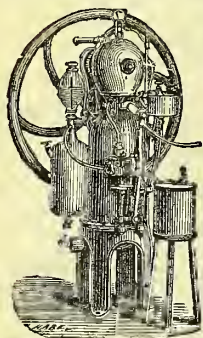
H. FAVARGER.

GOLD MEDAL]

MONDOLLOT'S PATENT

[PARIS, 1878.

SODA WATER MACHINERY.



The "MEDIUM" is guaranteed to make extra sharp Soda Water, and the finest Lemonade, Ginger Beer, Ginger Ale, &c.

The "MEDIUM" requires no skilled labour, and can be worked by hand or steam power.

The "MEDIUM" saves 50 per cent. of materials over any other hand machine, and requires less power.

The "MEDIUM" will last for years without repairs beyond the renewal of washers.

The "MEDIUM" requires no gasometer, and occupies but a quarter of the room of an ordinary machine.

The "MEDIUM" is automatic in all its work, and merely requires the wheel to be turned.

The "MEDIUM" is of the finest workmanship, and is in use all over the world.

Apply for illustrated Catalogue to

H. FAVARGER, 75^C TURNMILL STREET, LONDON.

SODA WATER & ICE

MAKING MACHINERY

AND ALL APPLIANCES FOR THE TRADE

BY

BARNETT & FOSTER

INVENTORS & MANUFACTURERS.

NIAGARA WORKS, 26^T EAGLE WHARF ROAD, LONDON,

SEND FOR CATALOGUE — FORWARDED FREE.

The Catalogue above referred to comprises every requirement for the Chemist in the way of Manufacturing and Dispensing all kinds of Aerated Waters. 3 Gold, 2 Silver, and 2 Bronze Medals. International Health Exhibition, London, 1884.

FRATELLI DE PASQUALE & CO.

LARGO MUNIZIONE, MESSINA, SICILY,

MANUFACTURERS, ESTABLISHED ON THE VERY GROWTH PLACE, FOR THE FINEST

ESSENTIAL OILS

Of Lemon, Bergamot, Sweet and Bitter Orange. Recently Awarded at the Exhibitions of

CALTANISSETTA, 1879—A Gold Medal and 200 Liras for Invention of Machinery to the use of their Manufactory, and Silver Medal for Excellence of Produce.

MILAN, 1881—A Bronze Medal for Excellence of Produce.

MELBOURNE, 1881—A First Order of Merit for Excellence of Produce.

MESSINA, 1882—A Gold Medal and 150 Liras for an ample set of Machines to the use of their Manufactory, and a Bronze Medal for Excellence of Produce.

A first trial order is quite sufficient to remain convinced of the Excellence of our Essences.

Samples and all particulars may be had from our Wholesale Agents—

SAML. LAMBERT & CO., DRUG BROKERS, 132 Fenchurch St., LONDON.

W. J. BUSH & CO.,

MANUFACTURING CHEMISTS,

DISTILLERS AND IMPORTERS OF

ESSENTIAL OILS AND FRUIT ESSENCES,

INVENTORS OF

SOLUBLE ESSENCES FOR AERATED WATER
AND CORDIAL MANUFACTURERS.

FRENCH CREAM GUM EXTRACT,

PROTECTED BY ROYAL LETTERS PATENT,

For producing a head of Creamy Richness upon all kinds of Syrups, Aerated Waters, Beers, Ales, Cider, Champagne, &c., 2s. 6d. per pound.

W. J. BUSH & CO. regret having to Caution the Trade against spurious imitations of this article, most of which are mere rubbish.

W. J. BUSH & CO.'S

ENGLISH DRAWN ESSENTIAL OILS.

OL. AMYGD. ESSENT. ANG.

OL. AMYGD. ESSENT. ANG.

Sine Acid. Prussic.

OL. ANETHI ANG.

OL. CARUI ANG.

OL. CARYOPH. ANG.

OL. CUBEBAE ANG.

OL. COPAIBA ANG.

OL. CINNAM. VER. ANG.

OL. MYRISTICÆ ANG.

OL. MENTH. PIP. MITCH.

OL. MENTH. PIP. MITCH.
RECT.

OL. PIMENTÆ ANG.

OL. PATCHOULI ANG.

OL. SASSAFRAS ANG.

OL. CORIANDRI ANG.

OL. SANTAL FLAV. ANG.

OL. LIMONIS

OL. BERGAMOT

} W. J. BUSH & CO.'S SPECIALITY.

ARTILLERY LANE, BISHOPSGATE, LONDON.

JEWSBURY & BROWN'S MANCHESTER MINERAL WATERS,

**PURE SODA, SELTZER, POTASH, LITHIA, &c.,
LEMONADE,
GINGER ALE, AND QUININE TONIC.**

Prepared and Bottled specially for Export, and warranted to keep well.

Manufactured with the utmost care and by improved machinery, these productions are recommended for purity and excellence of quality by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the Lemonade and Ginger Ale being procured from the fresh Fruit and Finest Jamaica Ginger, they may be relied upon as furnishing delicious and satisfactory beverages, either for general use or specially for invalids.

The Soda Water is absolutely free from any metallic impregnation, and being by improved machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of Pure Carbonate of Soda, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The Seltzer, Potash, and Lithia Waters are prepared with the utmost exactitude and the purest ingredients.

The New Quinine Tonic furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

Ginger Ale (Aromatic) of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

N.B.—Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.

Counter Bills and Analytical Reports, with Agents' Names and Addresses, supplied when requested.

A CERTIFICATE OF MERIT, for superiority of quality, was awarded to Jewsbury & Brown at the Exhibition of Sanitary Appliances, at Owens College, Manchester, on the occasion of the Meeting of the British Medical Association, August, 1877.

A CERTIFICATE OF MERIT awarded by the British Sanitary Institute of Great Britain, after a deferred PRACTICAL TRIAL AND EXAMINATION, July 4th, 1878.

JEWSBURY & BROWN, 44 Downing Street, 3 Grosvenor Street, and 113 Market Street **MANCHESTER.**

CANTRELL & COCHRANE'S

CELEBRATED

**AROMATIC GINGER ALE,
SPARKLING MONTSERRAT,
"CLUB SODA," AND
MINERAL WATERS,**

As supplied to Her Majesty's Imperial Houses of Parliament,

Have been Awarded **TWENTY-THREE GOLD AND PRIZE MEDALS** at the various International Exhibitions.

Goods for Export are specially prepared, and are guaranteed to keep in any climate.

PRICES AND TERMS ON APPLICATION TO—

**CANTRELL & COCHRANE,
BELFAST AND DUBLIN.**

LA BOURBOULE,

AN EMINENTLY RESTORATIVE MINERAL WATER.

Contains Chloride of Soda, Bicarbonates, Arsenics (28 millig. of arseniate of soda per litre).

Dose: Half a glass to three glasses per day before or during meals.

A Regenerator for Weakly Children, and for Debility in Adults; also in Anæmia, Fatty Degeneration, Affections of the Skin and Respiratory Organs, and Intermittent Fevers. Employed as a drink and in gargles for Bronchitis and Sore Throat, and as a drink and lotion in Ringworm, Chaps, and Redness of the Skin.

Anglican Divine service on Sundays.
London: GALLAIS & CO., 27 Margaret Street, W. INGRAM & ROYLE, 119 Queen Victoria Street, E.C. WILLIAM BETTS & SONS, 27 Henrietta Street, Cavendish Square. Liverpool: EVANS, SONS & CO.

By Special Appointment to
H.R.H. the Duke of Connaught and the Royal Family



BOURNE WATERS.

THE PUREST IN ENGLAND.

R. M. MILLS & CO.,

BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS,
LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid.

Prices and Pamphlet on application. Agents appointed.

TELEPHONE No. 7547.

THE ONLY PRIZE MEDAL




LONDON, 1881.


TELEPHONE No. 7547.

HIGHEST PRIZE MEDAL



BRADFORD, 1882.





 WRITE FOR PRICES, ETC.

~~~~~

Samples of Waters, in Bottles or  
Syphons, sent FREE.

~~~~~

HANDBILLS SUPPLIED GRATIS.


 ASSOCIATION, LIMITED,
 
45 Gifford Street,
LONDON.Sun Factory,
BRISTOL.Montpellier Works, Starbeck,
HARROGATE.PURVEYORS BY SPECIAL APPOINTMENT
TO HER MAJESTY THE QUEEN.

MUMBY'S MINERAL WATERS

Are Perfectly Pure and of First-class Quality.

SODA WATER, POTASS WATER,
SELTZER WATER, TONIC WATER,
GINGER ALE, LEMONADE, &c.

IMPORTANT TESTIMONIAL.

H.M.S. "SERAPIS," Portsmouth, 25th May, 1876.

Messrs. C. MUMBY & Co.,
Gentlemen,—The Soda Water supplied by you for the use of H.R.H.
The PRINCE OF WALES on board H.M.S. "Serapis" was of excellent
quality, kept in good condition, and gave great satisfaction to His Royal
Highness, his suite, and the officers of the ship.

(Signed) THOMAS BRADBRIDGE, Paymaster.
T. W. SCADDAN, Chief Steward.

These Celebrated Waters can be supplied in
Syphons with Silver-plated Tops.

GOODS CARRIAGE PAID. PRICES ON APPLICATION.

34 THE HARD, PORTSMOUTH.

London Agents:—Walker & Moore, 17 Redcross St.

TALBOT & CO.'S HIGH-CLASS MINERAL WATERS

OBTAINED THE



HIGHEST
AWARDS
GREAT
INTERNATIONAL
HEALTH
EXHIBITION
LONDON
1884

GINGER ALE

Unrivalled for fine Aromatic Flavour.

Write for Samples for comparison, which is the most satisfactory way of testing
GOODS SPECIALLY PREPARED FOR EXPORT.

Manufactory: GLOUCESTER.

HONOURABLE MENTION,
International Food Exhibition, Agricultural Hall, London, October, 1880.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER

(Guaranteed Pure and Free from Capsicum).

Trade Price, 5s. Od. per lb.; 12 lbs. and upwards, 4s. 6d.

Highly adapted for the manufacture of *Transparent Aërated Waters*, and for all *Dietetic, Medicinal, and Pharmaceutical* purposes.

Medical and other Opinions on

HAY'S Soluble Essence of Ginger.

"Singularly free from resin."—*The Lancet*.

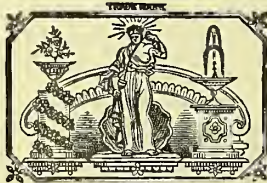
"It should entirely supersede the official preparation of the British Pharmacopœia."—*Medical Press*.

"This Essence is of a very delicate and beautiful appearance, the aroma is fine and powerful, and its strength is very great indeed. The flavour is really exquisite, and it concentrates in quite a remarkable degree the very best aromatic qualities of ginger."—*Drinks*, London, Sept. 1, 1884.

Medical Opinions on the Ginger Beer made from
HAY'S Soluble Essence.

"An excellent effervescing drink."—*The Lancet*.

"Preferable to some wines we have tasted under the name of champagne."—*Medical Press*.



Medical and other Opinions on

HAY'S Ginger Champagne.

"An excellent and most agreeable beverage."—*The Lancet*.

"One of the most delicate and wholesome drinks in the market."—*Medical Press*.

"The FINE AROMA OF GINGER which Mr. Hay has caught with remarkable success is an excellent SUBSTITUTE FOR ALCOHOL, as it gives what old port wine drinkers used to call 'BODY,' and to many people, besides professed teetotallers, an occasional change at least from the ROYAL FRENCH BEVERAGE to its less costly, but equally sparkling and MORE REFRESHING ENGLISH RIVAL, is a welcome treat."—*The Chemist and Druggist*.

HAY'S Ginger Ale.

"It pours out with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger. It is a beverage which is sure to win favour wherever introduced."—*The Chemist and Druggist*.

THE COMPOUND FORTIFIED ESSENCE

Specially adapted for the Manufacture of the

FINEST GINGER ALE.

This Essence, which is an addition of Vanilla, Lemon, and other flavours to the above, is strongly recommended for the manufacture of the finest Ginger Beer and Ginger Ale. It imparts, with the exquisite Ginger Aroma of the above-mentioned Essence, a peculiarly fine fruity flavour combined with the fullest amount of fragrance and pungency.

Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s. Od.

HAY'S GINGER CHAMPAGNE ESSENCE

FOR THE MANUFACTURE OF GINGER CHAMPAGNE.

This Essence is a combination of the Finest Flavours, and imparts with the Ginger, a most exquisite Aroma.

Trade Price, 8s. Od. per lb.; 12 lbs. and upwards, 7s. 6d.

HAY'S GINGER ALE ESSENCE,

HIGHLY CONCENTRATED.

This Essence is a complete Bouquet of the Finest Ginger, Lemon, and other flavours in a highly concentrated state. Ginger Beer and Ginger Ale made with this Essence will possess an amount of Aroma, Flavour, and Quality that have hitherto been without precedent, and that will be sure to command a large sale.

THE COST IN MANUFACTURE IS ABOUT ONE FARTHING PER DOZEN BOTTLES.

Trade Price, 9s. Od. per lb.; 12 lbs. and upwards, 8s. 6d.

HAY'S GINGER ALE EXTRACT

SUPPLIES PUNGENCY, AROMA, COLOURING, AND FLAVOURING.

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts an unusually Fine Flavour and Great Brilliancy, at a cost of a little under 1d. per dozen bottles.

Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s. Od.

PREPARED BY

W. HAY, Manufacturing Chemist, BEVERLEY ROAD, HULL.

Agents—Messrs. HEARON, SQUIRE & FRANCIS, Wholesale Druggists,
5 COLEMAN STREET, LONDON, E.C.

W. HAY CAUTIONS THE TRADE against the use of those spurious so-called SOLUBLE ESSENCES which, besides having NO GINGER AROMA, are FLAVOURLESS, RANK, and DISAGREEABLE, and are little more than TINCTURES OF CAPSICUM.

NOTICE TO CHEMISTS AND MANUFACTURERS.

DESIDERATUM MIXER
BRACHER'S PATENT

A REAL TIME, LABOUR, AND MONEY SAVER.

These Machines are admirably adapted for mixing all kinds of powders, heavy or light, in the shortest possible time, thereby superseding to a great extent the use of the pestle and mortar, supplying a long-felt want amongst Chemists and Druggists, Grocers, Confectioners, Druggists, Colour Merchants, and Manufacturers.

PRICE, WITH SIEVE AND CRUSHER COMPLETE, FROM £1.

CALCUTTA INTERNATIONAL EXHIBITION.**A GOLD MEDAL**

has been Awarded to P. H. BRACHER & CO., 7 High Street, Wincanton, for their Patent DESIDERATUM MIXER, as per Cable Message received 2nd Month 19, 1884.

TESTIMONIAL.

The Analytical Laboratory, 30 Hanover Street,
Edinburgh, March 7, 1884

Dear Sirs,—In replying to your letter of the 5th inst., allow me to say that we have much pleasure in testifying to the efficiency of the "Desideratum" mixer. Being the inventor of a complicated compound, with which I had no trouble in properly and rapidly mixing, I must say I am indebted to your machine very greatly on the score of *rapidity of operation*. I usually mix out 1 cwt. at a time; the material is heavy and apt to clog, but your machine has reduced these inconveniences to nil.

With best wishes,

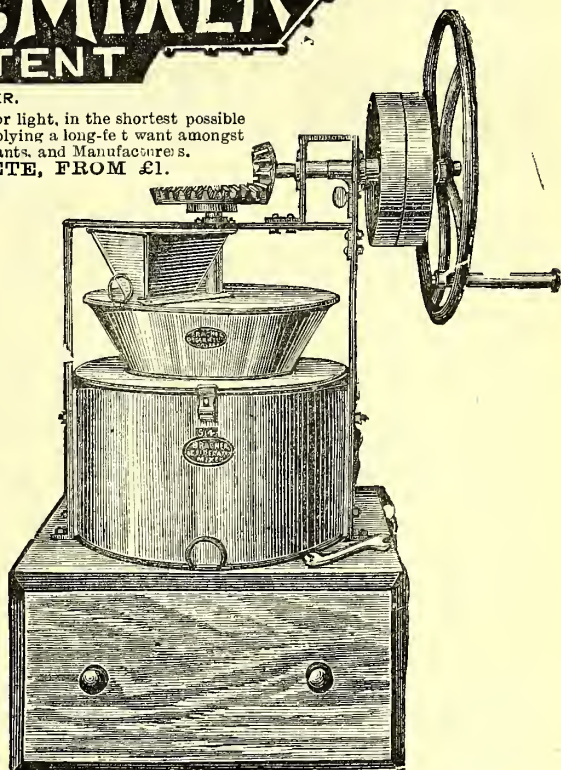
I am, yours very truly,

D. R. S. GALBRAITH.

Messrs. P. H. Bracher & Co.

Send for Illustrated Price List and full particulars, Post Free.

P. H. BRACHER & CO. (77 High Street), WINCANTON.



NEW AND IMPORTANT DISCOVERY.

GINGER ALE
FROM PURE JAMAICA GINGER.

SHIRE GINGER ALE, from Pure Jamaica Ginger, is Non-Intoxicating.



ABSOLUTELY PURE.—See Analysis by Drs. J. H. HASSALL, M.D., and OTTO HEYER, F.G.S.

The difficulty of using Ginger in the Manufacture of "Ginger Ale," and at the same time having a CLEAR and SPARKLING DRINK, has, after much labour and expense, been thoroughly overcome by

Messrs. HARSTON & CO., of LEEDS.

ESTABLISHED 1851.

BIRKBECK BANK.—Southampton Buildings, Chancery Lane.

THREE per CENT. INTEREST allowed on DEPOSITS, repayable on demand.

TWO per CENT. INTEREST on CURRENT ACCOUNTS calculated on the minimum monthly balances, when not drawn below £50.

The Bank undertakes for its Customers, free of charge, the custody of Deeds, Writings, and other Securities and Valuables; the collection of Bills of Exchange, Dividends, and Coupons; and the purchase and sale of Stocks, Shares, and Annuities. Letters of Credit and Circular Notes issued.

The BIRKBECK ALMANACK, with full particulars, post free on application. FRANCIS RAVENSCROFT, Manager.

THE BIRKBECK BUILDING SOCIETY'S ANNUAL RECEIPTS EXCEED FIVE MILLIONS.—HOW TO PURCHASE A HOUSE FOR TWO GUINEAS

PER MONTH, with immediate Possession and no Rent to pay. Apply at the Office of the BIRKBECK BUILDING SOCIETY, 29 Southampton Buildings, Chancery Lane.

HOW TO PURCHASE A PLOT OF LAND FOR FIVE SHILLINGS PER MONTH, with immediate possession, either for Building or Gardening purposes. Apply at the Office of the BIRKBECK FREEHOLD LAND SOCIETY, as above.

The BIRKBECK ALMANACK, with full particulars, on application. FRANCIS RAVENSCROFT, Manager.

DOULTON & CO., LAMBETH, LONDON, S.E.**DOULTON'S****MANGANOUS CARBON FILTERS**

(DR. BERNAYS'S PATENT).

ADVANTAGES:

MANGANOUS CARBON possesses very high FILTERING POWER.

Can be readily taken to pieces for cleansing.

NO water can remain in reservoir to become stagnant.

An entire absence of corrodible material.

**DOULTON'S IMPROVED****GRANULAR CHARCOAL FILTER.****ADVANTAGES:**

The Lower Bed is kept perfectly clean, thus aiding to the durability of the Filter.

A DOUBLE ACTION secured to the power of the Filtering Medium.

Any description of Filter Refitted at moderate charge.

Prize Medal, International Health Exhibition, 1884.



DOULTON & CO. also manufacture Boudoir or Table Filters, Pocket and Syphon Filters for Tourists' use, Manganous Carbon Self-acting Cistern Filters, Refrigerator Filters, Main Service Filters for Manufacturing purposes, Hotels, &c. May be had of all Dealers.—DOULTON & CO., Lambeth, London, S.E.

DEPOTS—100 SOHO STREET LIVERPOOL; GRANVILLE STREET, BIRMINGHAM; AND 6 RUE DE PAROIS, PARIS.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS, FOR THE PRODUCTION OF THE FINEST LEMONADE.

Added in the proportion of one fluid ounce to each gallon of syrup, the soluble essence imparts the most delicious flavour of the Lemon.
—*The Chemist's Journal.*



The Essence mixes well with water, and has a delicate flavour. The Lemonade made therewith has a far more delicate flavour than that generally met with.—*The Chemist and Druggist.*

Trade Price, 8/9 per lb.; 12 lbs. and upwards, 8/3

PREPARED BY

**W. HAY, Manufacturing Chemist,
BEVERLEY ROAD, HULL.**

GOLD MEDAL, LONDON.



**SIX GOLD AND PRIZE MEDALS,
1884,**

AWARDED TO

**LORIMER & CO.,
HARGRAVE PARK ROAD,
LONDON, N.**

TWO GOLD MEDALS, CALCUTTA



CHEMICALS, PHARMACEUTICAL PREPARATIONS, and FRUIT ESSENCES, bottled and in bulk for Export

CITRATE OF IRON AND QUININE, SULPHATE QUININE, ETC. SOLUBLE ESSENCES. TINCTURES AND SPIRIT PREPARATIONS IN BOND, ETC.

Agents Wanted in every City for the sale of Lorimer's well-known Specialities—"Chemical Food," "Quinine Wine," "Quinine and Iron Tonic," "Cod Liver Oil," "Lime Juice Cordial," "Citrate of Magnesia," "Flavouring Essences," and "Fruit Syrups," the sale of which is certain and profitable.

ORANGE WINE.

Most suitable for making Quinine Wine because of its containing the least percentage of tannic acid possible, and being in the most brilliant condition. In casks of not less 8 gallons, 4s. per gallon, carriage paid. Extra superior quality (finest made), 4s. 6d. per gallon, carriage paid.

SAMPLES FREE AND CARRIAGE PAID UPON APPLICATION TO

LAMB & WATT, 46 and 48 ST. ANNE STREET, LIVERPOOL
CASH OR USUAL TRADE REFERENCES REQUIRED WITH OPENING ORDERS.

HAY'S GINGER CHAMPAGNE

CAN BE OBTAINED FROM THE SOLE AGENTS,

INGRAM & ROYLE,

119 QUEEN VICTORIA STREET, LONDON, E.C.,
AND BATH BRIDGE, BRISTOL.

Retail Price, in Half Champagne Bottles, 5/6 per doz.

This SPARKLING, EXHILARATING, and REFRESHING DRINK, while being far more agreeable in bouquet and flavour than the FINEST CHAMPAGNE WINE, is, at the same time, unlike it, FREE from ALCOHOL.

It is strongly recommended both for Juveniles and Adults, &c., as the most Wholesome Stimulating Beverage that has hitherto been introduced, and should be in every household during all seasons of the year.

Samaritan Free Hospital, Lower Seymour Street,
Portman Square, London, W.

Dear Sir,—I have tried your Ginger Champagne, which I find to be excellent, and I look upon it as a step in the right direction towards meeting a long-felt want. Our Senior Physician, Dr. Henry Savage, has also tried it, and is much pleased with it. We ought long ago to have had such a beverage, and I believe that a great deal of drinking would thus have been prevented. I wish your effort much success.

I am, dear Sir, yours faithfully,
GEORGE SUDAMORE, Secretary.



An excellent and most agreeable beverage.—*The Lancet.*

Made by Mr. Hay, of Hull, with his well-known SOLUBLE ESSENCE OF JAMAICA GINGER, takes rank as a PURE, WHOLESOME, STIMULATING, and NON-ALCOHOLIC beverage.—*British Medical Journal.*

One of the most delicate and wholesome drinks in the market.—*Medical Press.*

SOLE MANUFACTURER—

W. HAY, Chemist, &c., 4 Regent's Terrace. HULL.

CASH PRICE

20s. for 12½ GALLONS.

CASKS FREE.

School of Cookery, Crystal Palace, S.E.
January, 1883.

MR. PETER TYRER,
SIR,—I have been using the "Borough"
Ketchup, and am very pleased with it. Its
flavour is excellent, both for all kinds of
Savoury dishes and Soups; and I most cer-
tainly should advise every cook and house-
keeper to use it, FOR I HAVE NEVER YET MET
ITS EQUAL.

MARIAN SMITHARD,
Lectress on Cookery.

MANUFACTORY—

70 LONG LANE, BOROUGH
LONDON, S.E.

Scotch Agency—115 West Nile Street, Glasgow.

DO NOT THROW MONEY AWAY
BUT WRITE
FOR A
FREE SAMPLE OF
SENT FREE
TO ANY ADDRESS

Tyrer's
"BOROUGH"
Ketchup

SILVER MEDAL
LONDON.

HARVEY'S SAUCE

For FISH,
STEAKS,
GAME,
&c.

CAUTION.

Each Bottle
of this celebrated
Sauce, prepared from
the *Original Recipe*, bears
the well-known Label, signed—

Elizabeth Lazenby

This Label is protected by PERPETUAL INJUNCTION in Chancery of the 8th July, 1858, and without it
none can be GENUINE.

Prepared only by E. LAZENBY & SON, LONDON.

And sold Retail by Grocers, Oilmen, Italian Warehousemen, &c., throughout the Kingdom.

SPECIAL NOTICE & CAUTION.

BRAND & CO.

The Original Manufacturers of Essence of
Beef (green label under wrapper), and
other Specialities for Invalids, have

NOT REMOVED

From their SOLE ADDRESS, No. 11
LITTLE STANHOPE STREET, MAY-
FAIR, W, and caution the trade to

BEWARE OF IMITATIONS.

BRAND & CO'S
SPECIALTIES FOR INVALIDS
ESTD 1835.

ESSENCES OF BEEF,
MUTTON, VEAL & CHICKEN,
BEEF TEA, TURTLE SOUP & JELLY,
MEAT LOZENGES &c.

SOLE ADDRESS
No. 11,
LITTLE STANHOPE
ST.
MAYFAIR, W.

SEVEN INJUNCTIONS have been granted during the past few months.



CAUTION! "YORKSHIRE RELISH."



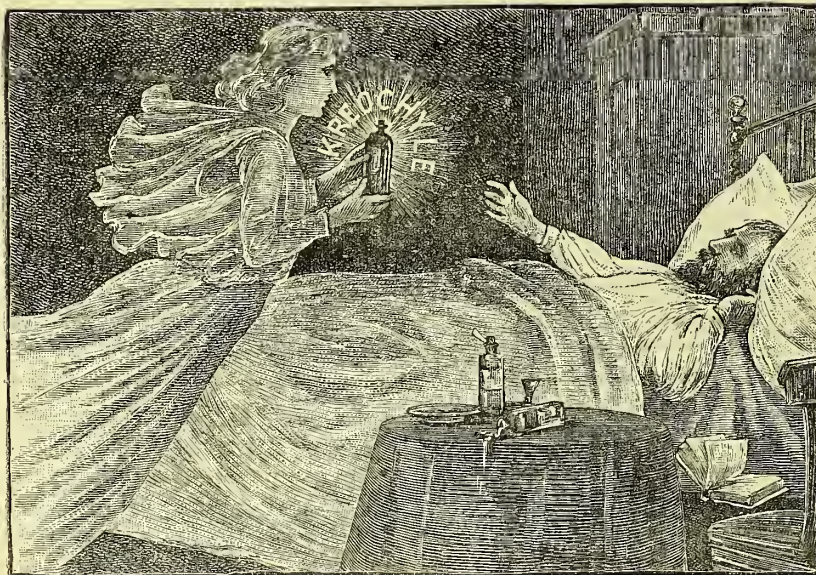
NOTICE IS HEREBY GIVEN that in several actions instituted by Messrs. GOODALL, BACKHOUSE & CO., of LEEDS, Injunctions have been recently granted by Judges of the Chancery Division of the High Court of Judicature, restraining several persons from using several Counterfeits of Messrs. GOODALL, BACKHOUSE & Co.'s Labels, and in particular against the use of the words "YORKSHIRE RELISH." The sole and exclusive right to the use of which words having been finally established by the above Firm, they will take immediate proceedings against parties manufacturing or offering for sale Sauce under the above title, not being of the manufacture of Messrs. GOODALL, BACKHOUSE & Co.

Information may be given to the undersigned,

J. SEYMOUR SALAMAN,

12 KING STREET, CHEAPSIDE, LONDON,

Solicitor to the Trade-Mark Protection Society.

**THE LANCET.**

"A most concentrated and active form of liquid food; contains large quantities of albumen."

BRITISH MEDICAL JOURNAL.

"Its administration has been attended with much benefit."

CROYDON GENERAL HOSPITAL.

"I have found it a most useful preparation in those cases where a nourishing and stimulating food is necessary."

BIRMINGHAM HOMOEOPATHIC HOSPITAL.

"I find it is retained when all other food is rejected."

ANDREW WILSON, Esq., F.R.S.E.

"Kreochoyle contains albuminous and nitrogenous compounds in very high proportions. Requiring no preparation, it possesses the immense advantage of always being ready for use. The effects of its administration are speedily observable in cases in which all other forms of nourishment have been rejected. One most beneficial property, that of rapid diffusibility, characterises it. The administration of Kreochoyle relieves pain and nausea until such time as other foods can be borne and digested. Those in want of a safe and satisfactory liquid food, for any form of weakness or disease, cannot do better than give Kreochoyle a trial."

KREOCHYLE

KREOCHYLE IS A PURE LIQUID MEAT, CONTAINING, IN ADDITION TO THE ORDINARY "MEAT EXTRACTIVES," THE WHOLE OF THE SOLUBLE ALBUMEN OF THE MEAT IN A FORM SUCH THAT IT IS ABSOLUTELY SELF-DIGESTIVE.

FOOD AND
STIMULANT

BARFF & WIRE

FOR INVALIDS
AND INFANTS.

PRICES—Retail, 5/ per pint; 2/9 per $\frac{1}{2}$ pint;
1/6 per $\frac{1}{4}$ pint.

HAND-BILLS, SHOW-CARDS, AND SAMPLES SENT WITH
EVERY ORDER IF DESIRED.

LIQUID MEAT.

BY ROYAL LETTERS PATENT.

**BARFF BORO-GLYCERIDE
FOOD PRESERVER.**

FOR MEDICAL & SURGICAL PURPOSES.

THE TIMES, April 1, 1882.—"When the Solution is added to Cream, the latter undergoes no change in the hottest weather; and Cream thus prepared has been sent both to Zanzibar and to Jamaica, arriving sweet and good at its destination in either case."

"The Fowls and Beef preserved by Barff Boro-Glyceride were only used this last voyage, making a period of four and a half months; they were firm and perfectly sweet. Signed, P. F. PIM, Steward steam yacht *Ceylon*, October 13, 1884."

THE LANCET.—"Nothing can be better than the action of this compound."

Pamphlets, Samples, &c., sent with each order if desired.

PRICES—Retail, 5/ per lb.; 2/6, $\frac{1}{2}$ lb.; and 1/ sized bottles.

FOR PARTICULARS CONCERNING KREOCHYLE AND BARFF BORO-GLYCERIDE APPLY TO THE

KREOCHYLE COMPANY, 9 FARRINGTON ROAD, LONDON, E.C.
TO BE OBTAINED OF ALL WHOLESALE HOUSES.

THE GREAT REMEDY FOR PRICKLY HEAT, HEADACHE, BILIOUSNESS, & FEBRILE DYSPEPSIA.

DRS. PROUT, MORGAN, TURLEY, GIBSON SPARKS, DOWSING, STEVENS, and many other Medical Gentlemen have given unqualified testimony to the importance of the discovery and the great value of

LAMPLOUGH'S

It possesses elements most essential to the Restoration and Maintenance of Health with perfect Vigour of Body and Mind.

It is effervescing and tasteless, forming, with water, a most invigorating, vitalising, & refreshing Beverage.

PYRETIC SALINE.

Gives instant relief in Headache, Sea or Bilious Sickness, Constipation, Indigestion, Lassitude, Heartburn, and Feverish Colds; prevents and quickly relieves or cures the worst form of Typhus, Scarlet, and other Fevers, smallpox, Measles, Eruptive or Skin Complaints, and various other altered conditions of the Blood. It is the cure for Cholera and Preventive of Dysentery.

Government Officials, Officers, and Planters caring for the welfare of their employes should note its value as a specific in Fevers.

To be obtained of any Chemist or Patent Medicine Dealer, and of H. LAMPLOUGH, 113 Holborn, London, E.C.

CONCENTRATED PATENT**PEPTONISED MILK**

AND

PEPTONISED MILK AND COCOA.

These two preparations are made with pure rich PRE-DIGESTED Country Milk, and, by mere dilution with hot water, afford a delicious restorative beverage the assimilation of which requires no digestive effort.

SAVORY & MOORE, LONDON.

Tins, 1s. 6d. and 2s. 6d. Obtainable Everywhere.

FOR INVALIDS & PERSONS OF WEAK DIGESTION.

ESSENCE OF BEEF.
AND OTHER SPECIALITIES.

IN TINS & GLASS BOTTLES.
Price List on application to the

LONDON MANUFACTURING CO.,
ASK FOR **LION SAUCE.** 59 to 61, HATTON GARDEN LONDON. E. C.

DR. KOCHS' MEAT PEPTONES.

A New really Nutritious and Agreeable Food for Invalids, as well as for all persons in good health.

A solution of the long-sought scientific problem. The nutritious constituents of fresh meat peptonised and retaining the albumen, forming a product of the highest alimentary order, not liable to decompose, agreeable to the taste, invigorating, and instantly assimilable, without requiring the process of digestion. Used with the best results in the Hospitals of London, Paris, Berlin, Vienna, &c. Specially recommended for convalescents, and for sufferers from dyspepsia, poverty of blood, sudden faintness, &c. For further details, see THE LANCET of September 6th, 1884.

Sole Consignees—WIDENMANN, BROICHER & CO., 33 Lime St., London, E.C.

**ICING AND KALI SUGAR.**

SAMPLES ON APPLICATION TO

W. HOSKIN,

SUGAR MILLS, NEW STREET, HUDDERSFIELD.

ESTABLISHED
1812Liquid Extract
of Annatto.**S. G. CLEMENTS & CO.**ESTABLISHED
1812.**DRUG AND
OIL
MERCHANTS**

PRIME

RENNET.

**SEED & DRUG
GRINDERS, IMPORTERS,**Butter
Colouring
in Oil.

THE NEWEST PRODUCTION FOR CHEESE-MAKING IS THE PRIME RENNET POWDER.
 Samples sufficient for practical test on application. Also Post samples of Liquid Extract of Rennet for producing
 the largest proportion of Curd; and of Vegetable Butter Colouring in Oil, perfectly innocuous, and imparting no
 flavour whatever to the butter. Very little required to give requisite tint.

DRUG AND SPICE MILLS, LEWIN'S MEAD, BRISTOL.
 London Agents—BARCLAY & CO., SANGER & CO., and all Wholesale Druggists.

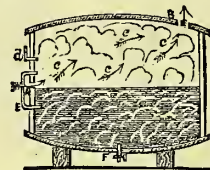
GEO. MASON & CO.'S

SPECIALITIES FOR
ESSENCE OF INVALIDS.
 BEEF, &c.

AS SUPPLIED TO THE LEADING HOSPITALS.

A LIBERAL TRADE ALLOWANCE.
 PRICE LIST POST FREE.

417 KING'S ROAD, CHELSEA,
LONDON, S.W.



NEW METHOD OF MAKING VINEGAR
 BY THE REVOLVING APPARATUS
 (Michaelis' Patent).

For further particulars

See the Chemists' and Druggists' Diary, 1884, page 274,
 OR APPLY TO

PAUL ROTHERMEL,
 105 (late of 27) LEADENHALL ST., LONDON.

FRY'S
MALTED COCOA

(PATENTED).

A Combination of FRY'S Pure COCOA EXTRACT with
ALLEN & HANBURYS' CONCENTRATED EXTRACT OF MALT
J. S. FRY & SONS, BRISTOL AND LONDON.

GIBSON'S**DELECTABLE JUJUBES, VOICE JUJUBES, AND GLYCERINE PASTILLES**

Put up in 4-lb. Decorated Tins with Glass Lids, *TINS FREE*, are now being inquired for by buyers from all parts of the world. They are
 not surpassed in quality by any maker, and give entire satisfaction.

MEDICATED and HIGH-CLASS LOZENGES, of every kind.

Sent out in 2-lb. or 4-lb. Bottles, Bottles Free; or in Tins, from 10 lb. upwards.

LIME JUICE TABLETS. PURE MALT TABLETS**ACID DROPS, AND BEST QUALITY BOILED SUGARS OF EVERY KIND.****GIBSON'S ORIGINAL CHLORODYNE LOZENGES.**

PENNY SUGAR WORM CAKES, suitable for either *children* or *adults*. Have an immense sale
 keep in any climate, and please everybody. Manufactured by

ROBERT GIBSON, Carlton Works, Hulme, Manchester, and 1 Australian Avenue, London

Price Lists sent on application. Our Goods can be bought through any Wholesale or Export House in London. Indents should be marked "Gibson's."

PREPARED
DANDELION
 (LEA & PERRINS').
 MADE WITH PURE
**DANDELION ROOT & THE FINEST
 COFFEE.**

Sold in Tins, at 8d., 1s. 6d., & 3s. each.

LIVER TONIC
 (GEORGE & WELCH'S).
 1s. 1½d., 2s. 9d., and 4s. 6d. per Bottle.

CARBOLINE (TOOTH PASTE)
 1s. 6d. per Pot.

Supplied by the Patent Medicine Houses on the
 usual terms, or the Makers

GEORGE & WELCH, WORCESTER.

WILLIAM BUSH & CO.,
 Manufacturing Chemists,
 YORK STREET, WALWORTH, LONDON, S.E.
 ESTABLISHED OVER 40 YEARS.

MAKERS OF

CITRATE of MAGNESIA,
MERCURIALS of every kind,
SWEET SPIRITS of NITRE,
SAL VOLATILE, B.P. & P.L.,
PURE VEGETABLE
COLOURS of every descrip-
 tion, in Sugar and Paste
 (to this department *W. B. &
 Co. have given special atten-
 tion, to meet the requirements
 of the trade*);
GLACIAL ACETIC ACID,

CONFECTIONERY
FLAVOURS of every kind,
 and
FRUIT ESSENCES.
SUPER ESSENCE of LEMON
 only,
MINERAL ACIDS of every
 kind,
TARTARIC, CITRIC, and
 other **ACIDS** (not makers of
these, but in a position to offer),
BORACIC ACID, &c.

SOLE PROPRIETORS OF

MARIGOLDINE,
 NEW COLOUR FOR BUTTER, CHEESE, &c.

After a lengthened investigation, the Proprietors are
 enabled to offer this novel preparation, representing the
 rich colour of the Marsh Marigold, in a highly concen-
 trated form. Being a Vegetable Extract, it will be
 found to impart to Butter a beautiful golden colour, free
 from taste, possessing its natural odour, and as pure as
 the herbage on which the animal feeds.

It is well known that in the Spring or Summer the rich
 colour of Butter is derivable from the Marsh Marigold
 and Ranunculus (Buttercups) of our pastures, and it has
 been the aim of the Proprietors to produce an article that
 will enable the dairymen to obtain uniformly, the same
 results at all times of the year in the most agreeable
 form; and it is confidently believed that it will be found
 superior to every preparation hitherto sold for the pur-
 pose. Its perfect compatibility with oil and grease of
 every description (not watery compounds) makes it
 useful for many other purposes in which it is desired to
 obtain a rich and delicate golden tint.

Sold by Chemists, &c., and Wholesale Houses.

*W. B. & Co. solicit inquiries, and will be happy to furnish Samples and Prices at all
 times.*



EIGHT PRIZE MEDALS AWARDED.

**GOODALL'S
 HOUSEHOLD SPECIALITIES.**

Yorkshire Relish

THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and
 it is the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is
 incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s.,
 and 2s. each.

CAUTION.—On each Yorkshire Relish Label is a Willow Pattern Plate
 and name, GOODALL, BACKHOUSE & Co. No other is genuine.

**Goodall's
 Baking Powder**

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and
 beautiful Light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and
 5s. Tins.

**Goodall's
 Quinine Wine**

The best, cheapest, and most agreeable tonic yet introduced. The best
 remedy known for Indigestion, Loss of Appetite, General Debility, &c.
 Restores delicate individuals to health and vigour. In Bottles, 1s. and
 2s. each.

**Goodall's
 Custard Powder**

For making delicious Custards without Eggs, in less time and at half the
 price. Unequalled for the purposes intended; will give the utmost satis-
 faction if the instructions given are implicitly followed. Sold in Boxes
 6d. and 1s. each.

**Goodall's
 Blanc Mange Powder**

Is acknowledged by all to be the most convenient and economical pre-
 paration ever introduced, as, by its use, a most Rich and Delicious Blanc-
 mange may be produced in a few minutes at a trifling cost, and may be had
 of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and
 Vanilla. Sold in Packets, 6d. and 1s. each.

**Goodall's
 Egg Powder**

Acknowledged to be the only real substitute for eggs yet discovered. Its
 action on Cakes, Puddings, &c., &c., resembles that of the egg in every
 particular, enriching them in colour and flavour, rendering them most
 wholesome and nutritious. One penny packet will go as far as four eggs; and
 one sixpenny tin as far as twenty-eight. In 1d. Packets; 6d. and 1s. Tins.

SOLE MANUFACTURERS—

GOODALL, BACKHOUSE & CO.,
 WHITE HORSE STREET, LEEDS.

A Monthly Price List of Druggists' Sundries, Patent Medicines, &c.,
 can be had post free on application.

"QUISQUIS ES"

IF YOU HAVE NOT YET TRIED AND SOLD

E. M. EDWARDS & SON'S

UNEQUALLED CEYLON TEA

IN LEADEN PACKETS

You have yet to add to your trade considerably. This Tea is grown in the fertile Island of Ceylon. As these Packets are perfectly air-tight, the Tea can be kept in them for a considerable length of time, and yet lose none of its fragrance and aroma. Being mild and invigorating, it is especially suitable for invalids and convalescents.

GUARANTEED TO BE ABSOLUTELY PURE, AND FULL WEIGHT WITHOUT THE PACKAGE.

Choice Ceylon Pekoe Souchong ... 2s. 6d. Choicest Ceylon Pekoe ... 3s. 0d.
Superb Small Leaf Orange Pekoe ... 3s. 6d.

Done up in 1-lb. and $\frac{1}{2}$ -lb. lead Packets. To be had in Half Chests (60 or 40 lbs.) and Boxes (20 lbs.).

BLENDED TEAS.

These Teas are selected from the choicest growths of the earliest pickings from the best estates in India, Ceylon, and China.

1/6 1/8 1/10 2/- 2/6 & 3/.

TERMS AND TASTING SAMPLES FREE ON APPLICATION.

EDWARD M. EDWARDS & SON,

WHOLESALE TEA DEALERS,

35 JEWRY ST., FENCHURCH STREET; Warehouse—LITTLE GEORGE ST., MINORIES,

AGENTS WANTED.]

LONDON, E.C.

[AGENTS WANTED.]

CHEMISTS' TEA AGENCY.

WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S

INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.—

AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and

2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank of England.

KANGRA VALLEY

Indian Tea Growers' Association,

11 PANTON ST., HAYMARKET

(Late of NEW COVENTRY STREET, W.)

The distinctive feature of the Business of this Association of Planters is that the Tea is delivered to consumers in the original 1-lb., $\frac{1}{2}$ -lb., tinfoil lined parcels in which it is packed on the plantations.

THERE ARE THREE QUALITIES:

ORANGE PEKOE, PEKOE, & PEKOE SOUCHONG.

Retailing respectively at 4s., 3s., and 2s. 6d.

They were EXHIBITED and INFUSED in the INDIAN TEA SECTION HEALTH EXHIBITION, and now at the ALBERT PALACE, BATTERSEA.

SPECIAL TERMS TO CHEMISTS.

Agents: Messrs. Barclay & Sons, Farringdon Street; Messrs. John Sanger & Sons, New Oxford Street, W.; Mr. Edwd. Cleaver, 39 Great Portland Street; and Messrs. W. Edwards & Son, 157 Queen Victoria Street, E.C.

THE

INDIAN TEA GROWERS CO.,

VIRGINIA BUILDINGS, GLASGOW,

Have for several years supplied FOUR STANDARD QUALITIES of their PURE TEAS—



PACKED in $\frac{1}{4}$, $\frac{1}{2}$, and 1 lb. TINS,

Which are very suitable for, and greatly popular with, Chemists and Druggists, and Fancy Warehousemen. The Home Retail Prices, marked in plain figures on each Tin, are 2/4, 2/10, 3/2, and 3/6 per lb., or in 5 and 10 lb. Tins, 1d. per lb. less.

Terms to Agents may be had on application to A. M. STEWART, Office of The Indian Tea Growers Co., Virginian Buildings, Glasgow.

MUSTARD.

FINCH, RICKMAN & CO.'S

Genuine Qualities

Are made from the finest mustard seeds only. Their compounds, as manufactured for upward of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medicinal purposes.

6 BROKEN WHARF, UPPER THAMES STREET
LONDON.

SAPERE AUDE !—“Water is the great carrier of the infective germs.” “It is the water to which we must look.”—THE LANCET, June 30, 1883.

JUDSON'S

“PERFECT-PURITY” FILTERS

AND

“GALVANO-ELECTRIC” FILTERING MEDIUM.

(UNDER FOUR PATENTS GRANTED 1884 and 1885.)

RENDER water PERFECTLY Pure; the purifying action of this Medium INCREASES with the IMPURITY of the water—the reverse is the case with ALL other mediums.

ILLUSTRATED PAMPHLET AND CATALOGUE POST FREE.

THE FILTERING MEDIUM.

Vital principle of Filters.

The filtering medium embodies the vital principle, so to speak, of the filtering apparatus. Some kinds of medium actually nourish animalcules, and impregnate water with many kinds of impurity. Of the various sorts of medium in general use we may mention the following:—Medicated felt, porous stone and pottery, sponge, leather, prepared paper, compressed blocks of carbon, spongy iron, silicate of magnesia, animal charcoal, &c. Among these felt, sponge, leather, and compressed blocks of animal charcoal should always be avoided: they harbour and propagate animalcules and noxious vegetable growths to an alarming extent. Animal charcoal, whether loose or compressed, is a most unsatisfactory medium. It is obtained by heating bones from all kinds of sources and in all conditions—sometimes diseased during life, or more or less rotten through *post-mortem* decay. If this heating or charring be insufficiently carried out (as to which there is no guarantee whatever), the charcoal retains sufficient animal matter to render it a source of positive danger, and most of the commercial varieties contain sufficient animal matter to render pure water as impure as if contaminated with sewage.

Various Media.

Composition of the “Galvano-Electric” Medium.

Conclusion.

It is well known, of course, that certain compounds of iron have a very destructive effect on organic matter—as shown by iron moulds on textile fabrics—and chalybeate waters containing these iron compounds naturally are perfectly free from organic impurity; but for domestic use it is essential that the water filtered through such compounds should afterwards have the iron in it removed. This removal is perfectly effected by the “Galvano-Electric” Medium.

The “Galvano-Electric” Medium is prepared from mineral substances only, which cannot, from the mode of their natural formation, contain even vegetable, much less animal, matter. To the beneficial action of that medium there is therefore no counter-action of questionable utility, as is the case with other filtering materials, which have any small amount of good effect greatly counterbalanced by useless or dangerous accompaniments.

Water—health-giving, life-promoting water—if neglected and defiled, becomes, inversely, disease-propagating, wide-spreading death. In this manner is the *absolute necessity* for domestic filtration severely enforced by the immutable laws of nature. Therefore are we surely justified in maintaining that the benefits are incalculable to be derived from the use of our “Perfect-Purity Filters” and “Galvano-Electric” Filtering Medium.

A VISIT TO OUR SHOW-ROOM AT N^o. 58 SOUTHWARK STREET, LONDON, S.E., IS EARNESTLY SOLICITED.

Pamphlet and Catalogue Post Free on Application to 77 Southwark S

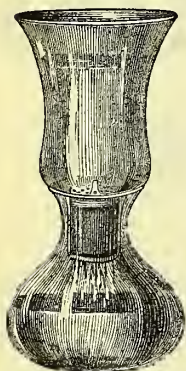
Hunyadi János

CAUTION.—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to **WARN** the British Public against **SPURIOUS IMITATIONS**. To secure genuineness, purchasers should see that every bottle has on the **LABEL** the name of "**THE APOLLINARIS COMPANY (LIMITED)**, London."

MAWSON & SWAN'S

PATENT.

PATENT.



NEW FILTERS,

IMPROVED AND PERFECTED SINCE 1884.

The most Effective, Convenient, and Elegant ever invented.
Removes Animal, Vegetable, and Mineral Contaminations.

The Filtering Medium is composed of pure animal charcoal of various grades of fineness, supported on and covered by glass wool, the whole held in position by a perforated plate mechanically secured. It can be easily removed and the charge renewed at home, sufficient charcoal being given with each filter for about six charges.

No Tubes or Corks to allow water to leak through unfiltered.
No Blocks to become choked or channelled.

RETAIL PRICES—Plain 4/6, with handle 5/6; engraved 6/6, with handle 7/6.
Earthenware Filters on the same principle, retail prices—1 gall., 14/6; 2 gall., 21/; 3 gall., 27/;
4 gall., 35/.

PROPRIETORS—

MAWSON & SWAN, 20 WEST GRAINGER ST., NEWCASTLE-ON-TYNE.

WHOLESALE AGENTS.—LONDON: Messrs. S. Maw, Son & Thompson; Messrs. Bentley & Sons; Messrs. Bourne, Johnson & Latimer; Mr. William Toogood; Messrs. Lynch & Co. MANCHESTER: Messrs. Woolley, Sons & Co. LIVERPOOL: Messrs. J. H. & S. Johnson; Messrs. Symes & Co. EDINBURGH: Messrs. Duncan, Flockhart & Co. GLASGOW: Glasgow Apothecaries' Co.

INTERNATIONAL HEALTH EXHIBITION.

MAIGNEN'S PATENT

"FILTRE RAPIDE."

GOLD MEDAL

FOR

WATER "FILTRE RAPIDE."

SILVER MEDAL

(HIGHEST AWARD)

FOR

Wine, Spirit, Beer, and Syrup
"FILTRE RAPIDE."

GOLD MEDAL

FOR

ARMY "FILTRE RAPIDE."

SILVER MEDAL

(HIGHEST AWARD)

FOR

WATER-SOFTENING Process for Boilers
(Saving Life in Workshop).

BRONZE MEDAL (HIGHEST AWARD) FOR

MAIGNEN'S Patent "ANTI-CALCAIRE" Powder
To SOFTEN WATER for WASHING.

Full particulars in Pamphlet, "Water, Preventable Disease, and Filtration," by P. A. MAIGNEN, 32 St. Mary-at-Hill Eastcheap, London.

By Appointment to H.R.H.

BIGG'S

the late Prince Consort.

SHEEP AND LAMB DIPPING COMPOSITION,*For Destruction of Ticks, Lice, &c., and Prevention of Fly.***HAS NOW BEEN USED WITH GREATEST SUCCESS FOR NEARLY HALF A CENTURY.**

PAMPHLETS ON APPLICATION.

LEICESTER HOUSE, GREAT DOVER STREET, BOROUGH, LONDON.

In any Town where no Agent exists Chemists are requested to apply.

WHOLESALE AGENTS FOR CANADA AND UNITED STATES—

EVANS, SONS & MASON, Limited, Montreal, Canada, and Rouse's Point, New York.

USED
ALL OVER THE WORLD UPON



MORE THAN 35,000,000 SHEEP
ANNUALLY.

**COOPER'S
SHEEP DIPPING POWDER,**

SOLUBLE IN COLD WATER,

THE CHEAPEST, SAFEST, AND BEST
FOR TICKS, FLY, SCAB,
And for all other Sheep Dipping purposes.

This Dip has been in use for 40 years, and has never been equalled; it is of uniform strength, does not stain the wool, is suitable for all climates, and equally good as a Summer or Winter Dip. It is especially recommended for Dipping Lambs and as a certain Cure for Scab.

It is vastly superior to all Carbolic and other Liquid Dips, being so much more reliable and lasting in its effects.

Counter Bills and Directions in English, Spanish, Dutch, &c., may be had free on application.

Terms and all particulars may be had of the Proprietors,

WILLIAM COOPER & NEPHEWS, M.R.C.V.S.,
Chemical Works, Berkhamsted, England.

FOUND DEAD

In the house. Thirty-six Mice were found dead by using one packet of **SANFORD'S MICE POISON**. Mice eat it readily and found dead on the spot. Sold in packets at 9d., 6d., and 1s. each. TRY **SANFORD'S CELEBRATED RAT POISON** and see its wonderful effect. 210 rats were found dead by one dressing with it by Mr. Ramplly, Manor Farm, Roughton, Hants. 130 rats were found dead in wheat stacks by Mr. Paine, Carlton. It is, without doubt, the best ever introduced. Price, 6d., 1s., and 2s., of **SANFORD & SON, Sandy, Bedfordshire.**

London Agents—Barclay, Edwards, Sanger, Sutton, and others.

100 Rats destroyed for a Shilling by

BARBER'S PHOSPHOR PASTE,

WRAPPED NEATLY FOR THE COUNTER.

Handsome, attractive Posters supplied; if conspicuously placed will command constant sale.

Kills Rats, Beetles,
&c.
THE DEAD VERMIN
DRY UP
WITHOUT SMELL.



Guaranteed the best
destroying Paste in
the world.

3d., 6d., 1s., 2s. 6d., and 5s. Tins. Also

BARBER'S VERMIN KILLER;

In 1d., 2d., 3d., 6d., and 1s. Packets. Kills Mice upon the spot.

Testimonial from Her Majesty's Ratcatcher, Hampton, Middlesex,
May 25, 1870.—

"I have been more than forty years employed at Hampton Court Palace, the Royal Stables, and other buildings in and around the Royal Parks, for the destruction of rats, mice, and other vermin. I have the entire charge of this duty, and after trying all the rat poisons which I have heard of at different times, I now use Barber's Phosphor Paste, and Vermin Killer, with which alone I am able to keep these ancient places and national works free from vermin. Signed, CHARLES SHONES."

ASK FOR BARBER'S, AND SEE THAT YOU GET IT**H. B. FIRMAN, Proprietor.****WORKS, SALISBURY. ESTABLISHED 1838.**

Special Quotations to Shippers.

Supplied by all the London Wholesale Houses.

BATTLE'S VERMIN KILLER. { Mice eat it readily, and Die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction. Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs. Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

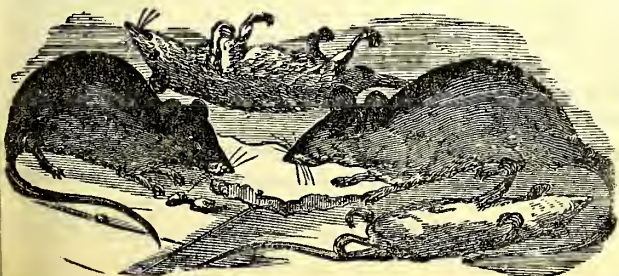
TESTIMONIALS.—Thousands might be published.

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy; to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet. From Mr. EDWARD STUEDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1857.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.
No Chemist or Storekeeper should be without a supply.



F. GREEN & CO.,

PHOENIX

DRUG, SPICE, AND SEED MILLS,

BIRMINGHAM,

HAVE for many years given careful attention to the selection of Seeds, Spices, Roots, &c., used in the manufacture of Cattle Condiments and Veterinary practice generally, and, having special machinery for separating all extraneous matter before grinding, and careful dressing afterwards, they can guarantee purity and full strength.

SPECIALITIES.

Pure Crushed Linseed.

Finest quality from Screened Seed. No oil extracted.

Price, in 1 cwt. and 2 cwt. bags (free), 17s. cwt.

Special Quotations to Buyers of 2 Tons and upwards.

Powdered Aniseeds - - -	38/ cwt.	Powdered Gentian Root (finest) -	35/ cwt.
„ Caraway Seed - - -	50/ „	„ Columba „ - - -	45/ „
„ Coriander Seed - - -	34/ „	„ Galangal „ - - -	48/ „
„ Fœnugreek Seed - - -	12/ „	„ Liquorice „ (finest) -	36/ „
„ „ „ bright - - -	15/ „	„ Turmeric „ - - -	28/ „
„ Cummin Seed - - -	42/ „	„ Grains of Paradise -	32/ „
„ Charcoal, Vegetable -	8/6 „	„ Ginger, fine Cochin -	70/ „
„ „ Willow - - -	20/ „	„ Cloves - - -	90/ „
„ Antimony Black - - -	26/ „	„ Cayenne - - -	100/ „

Coarse Powders ground to suit buyers at lower prices.

PACKAGES, NEW SACKS, OR PATENT AIR-TIGHT CASKS COST PRICE, NOT RETURNABLE

We recommend the Patent Casks at a cost of 1/- cwt.

TERMS—Nett cash with order or Trade references.

Drugs, Spices, Seeds, &c., ground for the Trade.

A VERY PROFITABLE AGENCY.

F. GREEN & CO., PHOENIX DRUG, SPICE, AND SEED MILLS, BIRMINGHAM,

The Largest Manufacturers of Cattle Condiments in the United Kingdom, beg to submit their Wholesale Price List, and to solicit a Trial Order.

GREEN'S THRIVING POWDER,

For COWS, SHEEP, PIGS, &c.

4-oz. Packets	1d.	.. ..	24s. per Cwt.
1-lb. "	3d.	.. ..	21s. "
2-lb. "	6d.	.. ..	" "
4-lb. "	1s.	.. ..	" "
7-lb. Linen Bags	1s. 6d.	.. ..	19s. "
14-lb. Canvas Bags	3s.	.. ..	" "
28-lb. "	6s.	.. ..	" "
56-lb. "	12s.	.. ..	" "
112-lb. "	24s.	.. ..	" "

GREEN'S CONDIMENT FOR HORSES.

Same Sizes, Prices, and Terms as Thriving Powder.

GREEN'S CONCENTRATED CONDITION POWDERS FOR HORSES.

1-lb. Canisters	1s. each	.. ..	9s. per doz.
6-lb. "	5s.	.. ..	45s. "
14-lb. "	10s.	.. ..	90s. "

GREEN'S PREPARED DOG MEAL.

1-lb. Packets	3d. each	.. ..	21s. per cwt.
7-lb. Linen Bags	1s. 3d.	.. ..	17s. "
14-lb. Canvas Bags	2s. 6d.	.. ..	" "
28-lb. "	5s.	.. ..	" "
56-lb. "	9s. 6d.	.. ..	16s. "
112-lb. "	18s.	.. ..	15s. "

GREEN'S POULTRY & GAME FOOD.

Same Sizes and Prices as Prepared Dog Meal.

GREEN'S MILK POWDER.

A highly Concentrated Food, and the best substitute for the Natural Milk, for REARING CALVES and other YOUNG STOCK.

7-lb. Linen Bags	1s. 6d.	.. ..	19s. per cwt.
14-lb. "	3s.	.. ..	" "
28-lb. "	5s. 9d.	.. ..	18s. "
56-lb. Canvas Bags	11s. 6d.	.. ..	" "
112-lb. "	22s.	.. ..	17s. "

GREEN'S POULTRY & GAME SPICE.

In 4-oz. Penny Packets only. 24s. per cwt.

GREEN'S CONCENTRATED POULTRY AND GAME SPICE.

1-lb. Canisters, 1s. each, 9s. per doz.

GREEN'S AROMATIC SPICE FOR HAY.

In 7-lb., 14-lb., 28-lb., 56-lb., and 112-lb. Bags, 21s. per cwt.
Retail Price 28s. per cwt.

PURE CRUSHED LINSEED.

17s. per cwt., net at Mills.

GROUND SPICES, SEEDS, &c.

Samples and Prices on application.

A Sample Case, containing an assortment of 2 cwt., sent Carriage Paid to any Railway Station in Great Britain, on receipt of P.O.O. or Cheque for 42s.

YIELDS 25 PER CENT. PROFIT.

Cattle Condiments, Horse Powders, and Veterinary Preparations supplied to the Trade in bulk at low prices for repacking. Private recipes faithfully prepared.

HAND BILLS AND SHOW CARDS FREE.

Any Chemist, on application to **THOMAS KEATING**, Chemist, St. Paul's Churchyard, London, can have these sent for enclosure to his London Wholesale House. The Bills are plain on one side, printed on four different colours, large enough to wrap a 6 oz. bottle. Two or three weeks' notice is required. Please send two labels that printer may add name and address correctly.

SPRATTS PATENT MEAT "FIBRINE" VEGETABLE DOG CAKES (WITH BEETROOT).

DOG MEDICINES for the Cure of Distemper, Worms, Mange, Eczema, Ear Canker, Rheumatism, and the various other Canine Diseases. Full List and Pamphlet on Canine Diseases, post free.

"COMMON SENSE OF DOG DOCTORING," price 6d.

DOG SOAP.

LOCURIUM. Price 6d. and 2s. per Bottle, retail. A Patent Vegetable Oil, curing Sore Feet in Dogs; Cracked Heels, Broken Knees, or Sore Backs in Horses; and Sores, Bites, and Wounds of all kinds either in man or beast.

Wholesale Terms of **SPRATTS PATENT, LONDON, S.E.**, or your Wholesale House.

**STRAINS, SPRAINS, RHEUMATISM, &c.,
IN HORSES AND CATTLE
QUICKLY CURED BY USING
NORMAN'S GALVANIZED FLUID,**
Sold in Jars, 2s. and 3s. 6d. each.

WHOLESALE AGENTS:
LONDON—BARCLAY & SONS, LYNCH & CO., and WM. EDWARDS & SON.

LIVERPOOL—JOHN THOMPSON, 58 Hanover Street.

AGENTS WANTED EVERYWHERE.
LIBERAL TERMS. PRINTED MATTER SUPPLIED.

Proprietors—**NORMAN & CO., BRISTOL.**
OFFICES—ATHENÆUM CHAMBERS.

Also Proprietors of **NORMAN & CO.'S BRISTOL METAL POLISHING POMATUM**; sold in Tins, 1d., 3d., 6d. and 1s. each. Samples and prices on application.

SPONG'S (Registered)
**BEDFORDSHIRE
PIG POWDERS**

Chemists can have space on Handbills for own speciality, under their Name and Address.
Wholesale of **BARCLAY, SANGER, EDWARDS, HOVENDEN, &c.**
Manufactory: BIGGLE-WADE, BEDS.

HAMBRO SPECKLED.



TRADE MARK
REGISTERED.

All Orders by Post receive immediate attention.

LEECHES!

Warranted Healthy, Wholesale and for Exportation, Direct from Marshes.

FITCH & NOTTINGHAM,
Leech Breeders,

MARSEILLES, & 55 PENTONVILLE ROAD, LONDON, N.

HOOSE OR HUSK IN CALVES.



TRADE MARK.

Is the only thing which will effect a **Safe, Speedy, Certain Cure.** Simply Fumigate One, Two, or Three Minutes, according to age and health of animal, and Cure will be complete. See Hundreds of Testimonials of the highest class. Sold in Bottles, each sufficient for One Calf, 1s 6d. each; or packed in boxes of 6, 6s.; or 10, 10s. each; with Garbett's Patent Cattle Fume Box (as below).

RICHARD GARBETT, WALSALL.

GARBETT'S

PATENT

[TRADE



MARK]

CATTLE

FUME BOX.

A NEAT, SIMPLE, and PERFECTLY SAFE APPARATUS for Applying Fumigations of all kinds. Price 5s. 6d. each; or fitted for Veterinary Surgeons' Use, 10s. 6d. each.

RICHARD GARBETT, Patentee, WALSALL.

**THE PATENT
POT-BOX**

Fitted with Heat
Regulator, for



**UNIVERSAL
HAND STOVE,**

Instant Use either
as

A Bronchitis Kettle, Inhaler, Fumigator, Saucepan, Food Warmer or Steam Bath Vapourer.

Will Boil Water in Open Air in any Weather in a Few Minutes. *Simple, Safe Purposeful, Reliable Everywhere.* Is invaluable to Invalids, Sportsmen, Volunteers, Clerks, Tourists, Travellers, Colonists, Bachelors, Students, Nurses, Night Workers, Housewives, and Professional Men alike, either at Home or Abroad, in Peace or War, Heat or Cold, Day or Night. Price 7s. 6d., 10s. 6d.; or Nickel Silver Plated 18s. and 21s. each, (or fitted for use of Veterinary Surgeons and Farmers 10s. 6d. each).

May be had of all principal Chemists and Dealers throughout the World, or of the Patentee, **RICHARD GARBETT, Walsall.** Supplied for use of Troops in Egypt.

HORSE, CATTLE, AND SHEEP MEDICINES.

BY ROYAL APPOINTMENT.



By Special Warrant,
Dated 27th December, 1865.



By Special Warrant,
Dated 10th February, 1866.

DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE

"ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS.

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

Patronised for over 50 years by the nobility and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

- "CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.
- "GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.
- "RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.
- "RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.
- "BRONCHOLINE," for Husk or Hoose in Sheep, Lambs, and Calves.
- "GASEODYNE," for Heaving and Paining, "CARMINATIVE CHALK," &c.

Price of Chest No. 2, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6 6s. Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS OF THE BRITISH ISLES.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed.

Awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, 1871; President's Medal, Spalding, 1872; Silver Medal, Manchester and Salford Show, 1874; Silver Medal, Preston, 1875; Silver Medal, Stamford, 1875; Silver Medal, Crewe, 1875; Special Prize, National Agricultural Society of Victoria, Australia, 1875; Medal, Chester, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, Newcastle-on-Tyne, 1877; Silver Medal, Knutsford, 1878; Medal, North Berwick, 1878; Medal, Dairy Show, London, 1878; Silver Medal, Derby, 1879; Silver Medal, Wellington, 1879; Medal, Benthams, 1880; Medal, Melbourne Exhibition, 1880; Silver Medal, Stourbridge, 1881; Silver Medal, Doncaster, 1882; Gold Medal, Christchurch, New Zealand, 1882; Silver Medal, Canterbury, 1882; Silver Medal, Kettering, 1883; and Medal, Amsterdam 1884.

CAUTION.—Beware of Imitations, and see that the name of DAY, SON & HEWITT is on all Bottles and Packets.

Prepared only by DAY, SON & HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W.

And sold by Messrs. Burgoyne, Burdidges & Co., Barclay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, Hovenden & Sons, and all Wholesale Druggists, in London: Hood & Co., Melbourne: Kempthorne, Prosser & Co., Dunedin and Auckland: Fairthorne & Co., Lancaster.

HORSES.—LIEUT. JAMES' BLISTER

(Manufactured by R. J. JAMES, the Grandson of the Inventor).

THIS CELEBRATED BLISTER IS NOW OFFERED TO THE TRADE AT THE FOLLOWING REDUCED PRICES:—
 1 oz. pots from 14/- per doz. to 12/6 per doz. 1 lb. pots from 4/4 0 per doz. to 4/4 0
 2 " " £1 5 6 " £1 8 0 " 1 " " 7 18 0
 4 " " 2 8 0 " 2 4 0 "

Observe the Trade Mark.—"A Horse's Head on the top of each Pot, and the signature, R. J. James."

Wholesale Agents, BUTLER & CRISPE, 4 Cheapside; NEWBERRY, 37 Newgate Street; MAW, SON & THOMPSON, 11 Aldersgate Street; HAYES & CO., Dublin; GOULDING, Cork; FOGGITT, Thirsk; and SANG & BARKER, Edinburgh. Agents for the Colonies required. Apply, with reference, to

R. J. JAMES, South Retford, Notts.

JAMES v. JAMES.—LORD ROMILLY, the Master of the Rolls, on February 23, 1872, declared "that I had an equal right with other members of the Inventor's family possessing the receipt to make and sell this Blister."—R. J. JAMES.

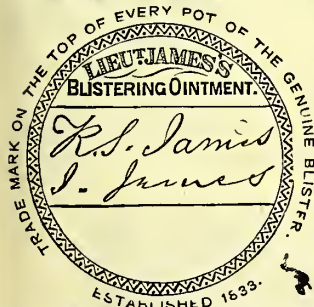
ESTABLISHED 1833.

HORSES.—LIEUT. JAMES' BLISTER.

CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, are now and have been Agents 52 years.



AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son, 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoyne, Burdidges & Co., 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; Southall Brothers and Barclays, Birmingham; R. Hovenden & Sons, 93 & 96 City Road, Finsbury; Sanger & Son, 150 Oxford Street; Millard & Sons, 40 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries Company, Virginia St., Glasgow; John Thompson, 53 Hanover Street, Liverpool; Boileau & Co., Bride Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith, Londonderry; M. C. Delacre, Pharmacie Anglaise, Bruxelles. And by all Chemists, in Pots, 1/6, 2/3, 5/6, 9/6, and 16/.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Felton, Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; DUNEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanistreet & Co.

W. H. JAMES, Sole Manufacturer, STAMFORD, FARMINGDON, BERKS.

Advertised in "Bell's Life" 52 years. Beware of Spurious imitations.

22 PRIZE MEDALS AND CERTIFICATES.

JEYES' "PERFECT PURIFIER."

THE BEST AND CHEAPEST DISINFECTANT, DEODORISER, AND CLEANSER.

Sanctioned by H.M.'s Board of Trade, and H.M.'s Government of India.—Non-Poisonous and Non-Corrosive.

JEYES' SANITARY COMPOUNDS CO., LIMITED, 43 CANNON STREET, LONDON.



An Infallible Cure for Splint, Ring and Sidebone, Spavin, all Bone Enlargements, Sore Shins, &c.

Testimonial (selected) from Mr. John Porter, Kingsere, February 3, 1885:—

Dear Sir.—Having thoroughly tested your Ossidine for Splints, Spavins, &c., I beg to say that it is the very best remedy I have ever applied. *Paradox*, *Luminary*, and *Ptolemy* have all been successfully treated. I shall recommend it to my friends most strongly.

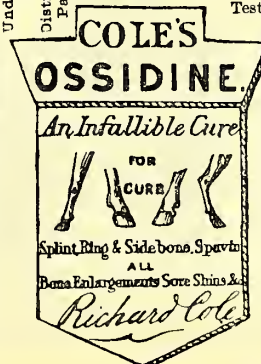
Truly yours, JOHN PORTER.

OSSIDINE.

Price, 10s. 6d. per Bottle, three for 30s., six for 58s. 6d., sent on receipt of remittance to a y address, carriage paid, by J. SWENEN, for the

PROPRIETOR, DARLINGTON, CO. DURHAM.

Wholesale Agents—BARCLAY & SONS. And of Chemists and Saddlers.



**THE ART
JOINERY WORKS.**

I am not only pleased, but delighted, with the shop you have just fitted for me. A. WALL, Bromley, Kent.
For Chemists' Shop Fittings, I consider your style and workmanship unique.

WILSON & SON, Chemists, Harrogate.

Both my shops at Westgate and Clacton-on-Sea are much admired, and I am well pleased with your work.
C. H. GOSWEN, Chemist, Clacton-on-Sea.

My shop has been admired by all that have seen it, and I am highly satisfied.
R. ADAMS, Croydon.

BOWLING & GOVIER, Medical Shop Fitters and Shop Front Builders
GUN STREET. BRUSHFIELD STREET, BISHOPSGATE, LONDON.

You have now fitted up three shops for me, each one having given me greater satisfaction: and if I required 20 shops I should put them into your hands to fit up.
I. H. BATEMAN, Brondesbury, Kilburn.

Your Pharmaceutical Dispensing Counter I consider complete in every detail, and great care appears to have been taken in packing.

H. B. WILLIAMSON, Wanganui, New Zealand.
Your workmanship is excellent, and was completed with promptitude and dispatch.

F. J. CLARKE, Bracebridge Hall, Lincoln.

You may refer any applicant who requires his shop fitted to me. I am perfectly satisfied with the work done and the amount charged. The shop is universally admired.
J. HERINGTON, Leighton Buzzard.

I consider your design and workmanship unequalled for Chemists' Shop Fittings, and I shall be pleased to recommend you.
C. ROBINSON, Streatham.

My shop at Wimbledon has been much admired, and I am very pleased with the manner in which you have executed the work.
D. C. CADMAN, Blackheath.

GEORGE TREBLE, JUN., FOOT & CO.,
CHEMISTS' SHOP FITTERS AND SHOW-CASE MAKERS.
PLANS AND ESTIMATES SUBMITTED.**FACTORY: 27 CANAL ROAD, WHITMORE RD., HOXTON, LONDON, N.****NOTICE FOR REFERENCES.**

J. JAMES, Thayer Street, W.; New Cross Road; Upper Tulse Hill, Brixton, and 260 Upper St., Islington.

Mr. DADSON, Romford Road, Manor Park.

Mr. JONES, 2 shops, New Wandsworth.

Mr. TRICK, Green Lanes; Ferme Park, Stroud Green; and 6 Abney Park Terrace.

Mr. TYLER, Victoria Parade, Felixstowe.

Mr. TRUNDLE, Barking Road.

Mr. STARK, Reswick Terrace, Lower Tooting.

Mr. FOREBS, Reigate.

Mr. MEACHER, Ferme Park, Finsbury Park.

WOOD & LAYNG, Finsbury Pavement.

POTTER & CLARKE, Holborn Viaduct.

CLARKE & Co., High St., Camden Town; and at Balls Pond Road.

WORKS: CROPLEY ST., HOXTON, LONDON, N.**J. & W. BYGRAVE**
DRUGGISTS'
SHOP FITTERS,AND
GLASS SHOW-CASE MANUFACTURERS,
CURZON STREET, WENLOCK STREET,
NEW NORTH ROAD, LONDON, N.**NOTICE OUR REASONABLE TERMS.**

No charge for packing or fixing, and all measurements of shops will be taken free of charge within 300 miles of London.

NOTICE.—We are the Best and Cheapest by 25 per cent. of any in the Trade.

NOTICE FOR REFERENCES.

WILKINSON & SIMPSON, New-castle-on-Tyne.

Mr. KAY, Northend, Sale.

Mr. DYER, High Street, Honiton, Devon.

Mr. JOHNSTONE, Newcastle-on-Tyne.

Mr. BOOT, Goose Gate, Nottingham.

Mr. ROBINSON, Alfreton Rd., Notts.

SAVAGE & ADAMS, St. James's Street, Brighton.

Mr. HORNE, Douglas, Isle of Man.

Mr. TULLY, West Hill, Hastings.

Mr. COONEY, Greyhnd Rd., Fllm.

Mr. FELLOWS, Mayfair, W.

Mr. WATSON, High Street, Grays.

Mr. HARRIDGE, Otland Park, Weybridge.

Mr. RUTTER, Annandale Road, Turnham Green.

Mr. SAUNDERS, Orford Road, Walthamstow.

THOMPSON & WALTON, Maiden head.

NOTICE ! 66 PENTONVILLE ROAD, N. SOLE ADDRESS.**LEMAITRE & CO.**

(ESTABLISHED 1830),

MEDICAL AND GENERAL**SHOP FITTERS,**
WRITERS, DECORATORS, &c.

SEND FOR OUR ILLUSTRATED LISTS.

Best Manufacture and Seasoned Wood.

ESTABLISHED 1830.

£50

COMPLETE FITTINGS

FOR

CHEMISTS' SHOPS.

£100

COMPLETE FITTINGS

FOR

CHEMISTS' SHOPS.

S. HOWLETT

Medical and General

SHOP FITTER,

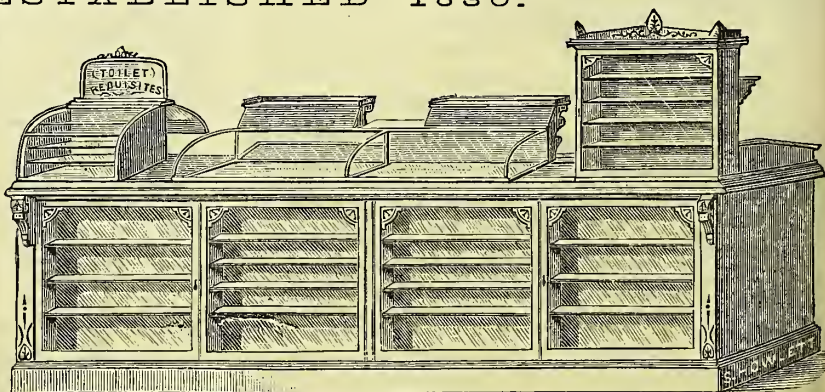
SHOP FRONT

BUILDER,

AND

Show-Case Maker, &c.,

4 Lindley Street, Sidney Street, Mile End Road, LONDON, E.



F. DARTON & CO.,

MAKERS TO H.M.'S GOVERNMENT,

45 ST. JOHN STREET, WEST SMITHFIELD.

[Established
1834.]

[Established
1834.]

Darton's Improved Imperishable Index Clinical Thermometers,

As noticed in the *Lancet*, *Chemist and Druggist*, &c., can be obtained only of the Inventors and Makers; cannot get out of order, and are therefore specially suited for Export.

4-inch or 6-inch, in Ebony or German Silver Case, 4/ each.
Fahrenheit or Centigrade scale, Fig. 1.



FIG. 1.

Do., in Sterling Silver case, 6/ each.
Ordinary Pattern, Contracted Stem, in German Silver case, 4-inch, only 3/ each.

DARTON'S IMPROVED LENS FRONT IMPERISHABLE INDEX CLINICAL THERMOMETERS, 4-inch or 6-inch (Fig. 2), 7/ each; if with contracted stem only, 6/ each.



FIG. 2.

1 Bent and 1 Straight 6-inch Clinical Thermometer in morocco-map case, 9/ the set.

KEY CERTIFICATES to any of above, 1/3 each extra. Special quotations for large quantities. Sent safely packed by post on receipt of P.O.O.

ENAMELLED TUBE BATH THERMOMETERS in japanned tin case, Silvered Metal Scale (Fig. 3), 15/ per doz.

Do., with Porcelain Scales, 24/ per doz.

LACTOMETERS FOR TESTING MILK, 7/ per doz.

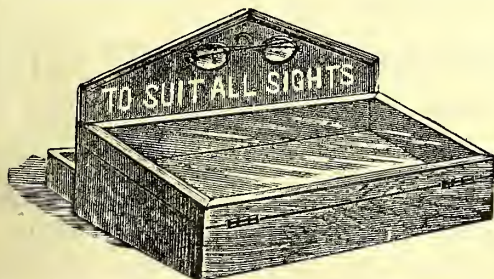
Do., Best, with Ivory Scales, Mercury Bulb, 16/ per doz.

All kinds of Meteorological Instruments made and repaired for the Trade.

SPECTACLES.

Our New Illustrated Price List of Spectacle Folders and Pocket Magnifiers is now in the press, and will be forwarded post free on application.

For the convenience of Customers who have not yet started the Sale of Spectacles, we fit up Show Cases, containing an assortment of Spectacles, complete with Sight Tester and Instructions, as follows:—



Our £2 2s. SHOW CASE for the Counter, in Polished Mahogany, contains 4 dozen Spectacles, Sight Tester, and Instructions for suiting sight.

Our £3 3s. CASE contains, in addition, 2 dozen Folders and 2 dozen Cases.

Larger sized Cases, in Polished Mahogany or Ebony, with an assortment of superior quality Spectacles, Folders, and Cases, £6 6s. and £10 10s.

Ditto, with assortment of Best Pebble Spectacles and Folders, £21.

CARVED OAK FITZROY BAROMETER

As Fig. 7.

With Illuminated and Varnished Scale, fitted with Storm-glass and Thermometer, forming a handsome and useful addition to a chemist's shop, £1 5s.



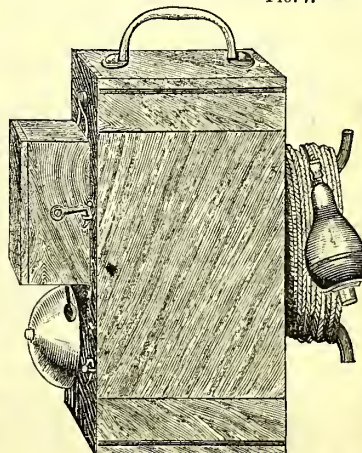
FIG. 7.

ELECTRIC BELLS.

CHEAP ELECTRIC BELL SET, with Wire Push, Battery, and Instructions, 8/6.

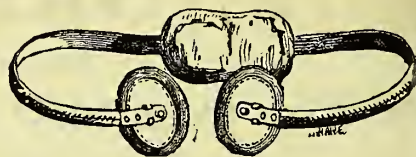
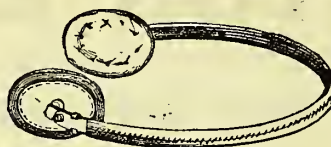
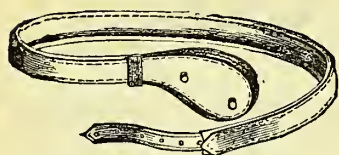
Do., with best mahogany case, Bell, No. 2 Battery, and best line wire suitable for fixing to shop door, 10/6; if with Metal Push with word "Press" on for out-door use, 12/6.

INVALID'S BELL SET, in polished mahogany case, with Twisted Silk Cord, Pear Push, and best Bell (Fig. 6), 16/ each.



Illustrated List of Bells, Batteries, Medical Coils, Magneto-Electric Machines, &c., on application.

BAILEY'S



TRUSSES.

			SINGLE.	DOUBLE.
CIRCULAR, Full-length Springs, Covered Basil and Chamois, or Moleskin (1st Quality)			21/-	34/-
Ditto, Covered in Roan and Moleskin (2nd Quality)	...	...	16/-	30/-
Ditto, Narrow Springs, Covered in Blue or Red Roan or Moleskin (2nd Quality)			24/-	40/-
SCROTAL, Covered Basil and Chamois or Moleskin (1st Quality)	...	...	48/-	84/-
Ditto, Covered in Roan and Moleskin (2nd Quality)	...	...	40/-	68/-
SALMON & ODY'S Expired Patent, Covered in White Roan and Doe (1st Quality)			36/-	72/-
Ditto, Ditto, Covered in Basil and Chamois (1st Quality)			30/-	60/-
Ditto, Ditto, Ditto, (2nd Quality)			27/-	54/-

SPECIALITIES:

TRUSSES, ELASTIC STOCKINGS, SUSPENSORY BANDAGES, AND SURGICAL APPLIANCES GENERALLY.

FIRST PRIZE SILVER MEDAL AWARDED, MAY 1879.

WHOLESALE AND SHIPPING TERMS ON APPLICATION. SPECIAL TERMS TO LARGE BUYERS.

38 OXFORD STREET, LONDON.

T. BRADLEY'S

AWARD OF MERIT, INTERNATIONAL EXHIBITION, 1881,

IMPROVED

WATERPROOF TRUSSES.

CAN BE WASHED. ENTIRELY WATERPROOF.

Children's Truss, Single, per doz. ...	18/0	For Scrotal Hernia, Single, per doz. ...	24/0
" " Double, " ...	26/0	" " Double, " ...	34/0

ADVANTAGES:

They are half the price. They are more durable. They are much softer, and therefore easier to wear than ordinary ones. They are non-irritating, and can be washed and kept clean.

T. BRADLEY'S INDIARUBBER TRUSSES. BEST QUALITY.

Children's Single Trusses ...	24/0	For Scrotal Hernia, Single ...	30/0
" Double " ...	30/0	" " Double ...	37/0

IMPROVED GUM ELASTIC TRUSSES

Children's Trusses, Single ...	30/0	Children's Trusses, Double ...	40/0
--------------------------------	------	--------------------------------	------

The improvement in Gum Elastic Trusses consists in their being softly Padded, whereas the ordinary ones in Gum Elastic are perfectly hard and solid.

SPECIAL PRICES FOR LARGE QUANTITIES.

T. BRADLEY, 225 GT. DOVER STREET, BOROUGH, S.E.

CREDIT TO WHOM CREDIT IS DUE

WITHIN A COMPARATIVELY RECENT PERIOD an agent has been introduced in medicine which has commanded the universal attention of the profession. It has already greatly reduced the rate of infant mortality by its property of imparting to the cows' milk all the characteristics of mothers' milk. In various diseases of the digestive organs, as gastritis, gastric ulcer, &c., and in the course of acute and infectious diseases, its usefulness in pre-digesting all kinds of food cannot be gainsaid.

This new agent is the practical result of much previous scientific inquiry, and, as it takes the foremost rank in recent medical progress, the question very naturally arises—To whom does all this credit belong?

Dr. H. Critchett Bartlett relates that in the course of some protracted experiments carried on in conjunction with others a few years ago, he was compelled to rely on preparations made by himself. He says the so-called "pancreatin sold at the shops proved so unequal in its action as to disturb all parity of experiment. *If I had been dependent upon any of the samples of prepared pancreatin I was able to procure from our best-known English druggists, I should have been compelled to relinquish all further research.* . . . Very little can be said in excuse for the manufacturers." He calls these preparations "the bad pancreatin supplied from the shops." Long before this date, so eminent an authority as Dr. George Harley had stated that if a pancreatic preparation could be obtained perfectly pure, "it would prove the greatest boon ever conferred upon suffering humanity." That day had not yet come!

All authorities upon the subject were agreed that the most desirable form in which to obtain the digestive enzymes was as an extract. We do not know of anyone who has ventured to set himself on record to the contrary. Dr. William Roberts, of Manchester, very properly asserts of solutions of the pancreas that they are "extremely perishable—they pass quickly into putrefaction." Speaking of various means employed to obviate this vital obstacle to their acceptance, he adds: "These preservatives have a pronounced taste which it is impossible to get rid of."

The term pancreatin was first given by Corvisart to the proteolytic element of the pancreatic juice, but Kühne subsequently named this enzyme trypsin. The *Extractum Pancreatis of Fairchild* is not a pancreatin alone—it is more; it is an extract of the pancreas, containing, in addition to pancreatin or trypsin, all the digestive ferments of the gland.

Though the pancreas was known to the ancients, its functions were not understood. The alkalinity of its secretion was ascertained by Tiedemann and Gmelin, and its resemblance to saliva by Leuret and Lassaigne. Eberle discovered the action of its emulsive enzyme, Valentin (1844) of its amylöpsin—isolated by Cohnheim and Wittich—and Cl. Bernard (1846) of its steapsin, or fat-splitting enzyme, and tryptic properties, which were alluded to by Perkinje and Pappenheim (1836). With the proteolytic action of the pancreas the names of Corvisart, and more especially Professor Kühne, of Heidelberg, are closely identified. The antecedents (or "mother substance") of the enzymes found in the

secretive cells were discovered by Heidenhain, and the peptogens by Schiff. Much of our knowledge of the intermediate digestive products was given us by Kühne.

In the study of the general subject of digestion, the valuable writings of such authorities as Pavy, Brunton, Fothergill, Gangee, and others in their respective fields of work, may be profitably consulted, and will be found to possess a highly practical character, not wanting in originality.

Though Eberle was the first to show that pancreatic infusions retained the activity of that secretion, *Dr. George Harley was the first who ever put to practical application the enzymes of the pancreas.* He made a preparation from the gland which he administered with apparent benefit in the treatment of a case of obstruction of the pancreatic and biliary ducts in doses of $1\frac{1}{2}$ grain in pill three times a day. This will be found reported on page 73 of his well-known work on "Jaundice and Diseases of the Liver and Pancreas," published in 1863. At the Annual Meeting of the British Association for the Advancement of Science, held at Leeds, in 1858, he read a paper entitled "Notes of Experiments on Digestion," in which he stated that he had ascertained "that the pancreatic secretion unites in itself the functions of the salivary, gastric, and biliary secretions," and "that it would be an invaluable substance to those who suffer from indigestion." He performed experiments with his pancreatic preparation, demonstrating its activity on proteids, starch, and fats. These facts were again published in the January number (1860) of the British and Foreign Medico-Chirurgical Review, in a paper by him under the title "Contribution to our Knowledge of Digestion."

Great credit is due to Dr. Harley for this advance. His idea was seized upon by others immediately, but on account of the cost attending the isolation of his preparation from the pancreas, manufacturers resorted to methods which yielded only worthless products and flooded the market with the valueless pancreatic preparations, every one of which Dr. Bartlett so properly condemned.

Now it was the distinguished chemist, Dr. Fairchild, who first prepared and gave to the world a perfectly pure and active, yet economical, extract of the pancreas—a preparation not in solution, but in the form of a beautiful dry powder. And it is of Dr. Fairchild's discovery, *Extractum Pancreatis*, that the eminent physician, Dr. J. Lewis Smith, says:—"It has already produced good results in Europe and America." It affords a natural and most efficacious remedy for the treatment of dyspepsia. Administered in the form of tablets, it is the only therapeutic resource in many forms of intestinal indigestion and derangements of the pancreas, as occlusion of its duct, &c. It is our only means of pre-digesting all kinds of food in such a manner that they may be given fresh and toothsome, not burdening digestion but bestowing rest, and are retained when all else is rejected. It is the only agent which will do for the digestive organs in disease what they may be unable to do for themselves. It has revolutionised infant dietetics, inasmuch as by its use cows' milk is rendered precisely like mothers' milk in every particular. So much then for the men who deserve the credit.

Burroughs, Wellcome & Co., London, E.C.

BRITISH PHARMACOPŒIA, 1885.

SOUTHALL BROS. & BARCLAY

Have issued a special list, giving prices of the new Drugs and Preparations. There are also added notes comparing the New Pharmacopœia with the 1867 Edition, and the United States Pharmacopœia, 1880. Post free on application.

SOUTHALL BROS. & BARCLAY

Will have ready shortly fresh editions of their

ORGANIC and INORGANIC MATERIA MEDICA CABINETS

Enlarged and revised according to the New British Pharmacopœia, 1885.

SOUTHALL BROS. & BARCLAY, Manufacturing Pharmaceutical Chemists, BIRMINGHAM.

DRAPER'S INK (DICHROIC)

THE NEW BLACK INK, different from anything else ever produced.

Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

It writes almost instantly full black.

Does not corrode Steel Pens.

Dries rapidly on the Paper.

Is cleanly to use, and not liable to blot.

Flows easily from the Pen.

Blotting-paper may be applied at the moment of writing.

In Jars, 6d., 1s., and 2s. each.

Can be obtained, in London, through Messrs. BARCLAY and SONS, Farringdon Street; W. EDWARDS and SON, 157 Queen Victoria Street, E.C.; F. NEWBERRY and SON, Newgate Street; S. MAW, SON, and THOMPSON, Aldersgate Street; HAYDEN and CO., 10 Warwick Square, Paternoster Row; HOVENDEN and SONS, City Road; AYRTON and SAUNDERS, Duke Street, Liverpool; GOODALL, BACKHOUSE and CO., Leeds; JNO. HEYWOOD, John Dalton Street, Manchester; JAMES HEMINGTON, 6 Moor Street Birmingham; HENRY HODDER, Broad Street, Bristol.

BEWLEY & DRAPER, Limited, DUBLIN.

See "CHEMIST AND DRUGGIST," December 15th 1874

SAVORY MOORE'S PANCREATIC EMULSION,

OR PANCREATISED (PREDIGESTED) FAT,

Largely Prescribed as an Article of Diet in all cases of CONSUMPTION, WASTING, LOSS OF APPETITE, STRENGTH, AND DIGESTIVE POWER.

The special advantage of Pancreatic Emulsion is that it provides the NATURAL STABLE SOLID FATS OF FOOD, predigested by the action of the Pancreatic secretion, so that they can be taken without the least disturbance of the digestive functions. As it provides solid fat, it is well to make it alternate with a liquid fat, like Cod Liver Oil, even where the latter agrees; and in many cases where Cod Liver Oil disagrees it may be permanently substituted with the greatest advantage, or it may be taken with the Oil, the assimilation of which it actively promotes.

The Emulsion is of the consistence of Devonshire Cream, easily miscible with fluids, and quite unobjectionable in taste. It may be given in milk or water, and with the addition of a little wine or brandy if desired.

In Bottles, 2s. 6d., 4s. 6d., and 8s.

SAVORY & MOORE, 143 NEW BOND ST., W.



COLONIAL BUILDINGS, 42 CANNON STREET, LONDON, E.C.

Published on the 15th of each Month.

Subscription 10s. per year, payable in advance;
commencing from any date.

Post free to every country in the world. Single copies, 1s. each.

Supplied only to persons connected with the Trade.

By our clubbing arrangements THE CHEMIST AND DRUGGIST and THE DRUGGIST'S CIRCULAR, of New York, are supplied together for 14s. 6d. per annum through us, or \$3.50 per annum through the office of our New York contemporary.

Post Office Orders to be made payable to EDWARD HALSE, at the General Post Office.

Literary Contents.

PAGE	PAGE
The Month 483	Pharmaceutical Congress—cont.
The Chemist and Druggist of	The "Times" and "Punch"
Australasia 483	on the Pharmaceutical Con-
Corner for Students 484	gress 503
Provincial Reports 485	The British Pharmaceutical
Fires 487	Conference 505
The International Pharmaceu-	Pharmacy in Australia 523
tical Congress 483	Pharmacy in Canada 524
Opening Ceremony 490	The Chemist and 'Druggists'
Pharmaceutical Specialties 491	Trade Association 522
The Sale of Powerful Medi-	South African Pharmaceutical
cines 493	Association 525
The Sale of Morphia 493	Editorial Notes—
Report on Pharmaceutical	International Pharmaceutical
Education 494	Congress 526
The Limitation of Pharma-	International Pharmacy 527
cies 495	Trade Notes 528
Veterinary Pharmacy 496	Obituary 528
Poisonous Alkaloids and	Suggestions 528
Glucosides 496	Educational Information 529
The Preparation of Medical	Trade-marks Applied for 539
Chemicals by Pharmacists 497	Miscellaneous Formulae 540
Potable Waters 498	Trade Report 542
The International Pharmaco-	Monthly Prices Current 545
poeia 499	Correspondence 547

The new edition of the British Pharmacopoeia has been published, and official intimation of the publication appeared in the London, Edinburgh, and Dublin *Gazettes* of September 1. This work is now, therefore, officially authorised.

Our space is so largely occupied this month by reports of the International Pharmaceutical Congress at Brussels, the British Pharmaceutical Conference at Aberdeen, and by Educational information, that we are compelled to omit several of our usual features.

The Brussels Congress was a brilliant success in point of the number and quality, both social and scientific, of the attendance. Resolutions were passed demanding the entire suppression of pharmaceutical specialties, the limitation of pharmacists in proportion to population, the universal adoption of the title Doctor of Pharmacy in place of pharmacist or its equivalent, and others equally outside the range of at least British pharmacy. The most important business of the Congress was the reception of the draft of an International Pharmacopoeia. This is to be published for criticism, but it will await the next Congress (at Milan, in 1888) for final adoption.

The 22nd British Pharmaceutical Conference at Aberdeen, under the presidency of Mr. J. B. Stephenson, of Edinburgh, was a pleasant and fairly profitable meeting, well attended, and *over-entertained* by the local pharmacists. The President discussed generally the position of the pharmacist, and appropriately added a survey of the new Pharmacopoeia, remarkably comprehensive, and with useful criticisms thrown in. The papers read were, in many cases, repetitions in different form of material which has already been made public. Birmingham has been chosen as the next place of meeting, with Mr. Greenish as President.

THE CHEMIST AND DRUGGIST OF AUSTRALASIA.

DURING the past few years our circulation in the Australasian Colonies has grown to such importance, and we are so convinced of the vast commercial value of these colonies, both now and still more in the near future, that we have decided to establish a branch office of our journal in Melbourne. Several of our staff leave this month by the s.s. *Chusan* and *Theria*, and *viâ* the United States.

The journal which we shall publish in Melbourne will follow the lines of its parent and ally, THE CHEMIST AND DRUGGIST of London, but will supplement the latter by providing full reports of all matters of colonial interest.

THE CHEMIST AND DRUGGIST OF AUSTRALASIA will have correspondents in Adelaide, Auckland, Brisbane, Hobart, Sydney, and Wellington, and thus, with the central office in Melbourne, the news of all the Colonies will be reported. There are already pharmaceutical societies in several of the colonies, each perfectly distinct from the rest. Our journal, without being the organ of any one of the societies, will, we trust, officially, fairly, and fully represent them all, and will link the Australasian pharmacists more closely than ever with those of the home country.

We have abundant evidence that such an enterprise as we have undertaken is wanted by the general body of chemists and druggists in the Australasian Colonies, and we are confident that the effect of it will be to ensure for THE CHEMIST AND DRUGGIST even greater influence as a trade journal than it has hitherto enjoyed.

We print below extracts from a circular which we have sent, we believe, to every druggist in all the Australasian Colonies, of whom already three-fourths receive THE CHEMIST AND DRUGGIST regularly.

Preliminary Announcement to the Trade of Australasia.

It is generally known that THE CHEMIST AND DRUGGIST of London has acquired much favour and a position of considerable influence throughout the Australasian Colonies.

It has been adopted by the Pharmaceutical Societies of New South Wales, of New Zealand, of Queensland, and of Victoria, and in accordance with special contracts the monthly journal and the annual diary have been supplied to all the members of those societies.

With the intention of supplying still more efficiently the requirements of Australasian pharmacists, and in order to ensure for THE CHEMIST AND DRUGGIST a permanent and universal circulation throughout all the Australasian Colonies, and also with a view of maintaining and promoting intercourse between all the great sections of English-speaking pharmacists, the proprietors of THE CHEMIST AND DRUGGIST have determined to open an office in Melbourne, and at once to publish

THE CHEMIST AND DRUGGIST OF AUSTRALASIA.

This journal will be an organ of intercommunication among all Australasian pharmacists, and a medium for the reports and announcements of various societies. It will be supplied free to all members of Australasian Pharmaceutical Societies contracting for THE CHEMIST AND DRUGGIST of London, as well as to all subscribers to that journal in those parts of the world.

In order to carry out this programme with the utmost thoroughness, several members of our staff leave England this month for Melbourne, and we hope to follow this circular very shortly with a specimen copy of our new publication.

THE CHEMIST AND DRUGGIST, with its Australasian Supplement, will thus maintain and extend its unrivalled circulation. Advertisements inserted in THE CHEMIST AND DRUGGIST will be seen by every firm whose custom is worth attention, not only in Australasia, but also throughout the United Kingdom, India, Canada, and other parts of the world.

We ask attention to an advertisement inserted in another part of this journal, inviting applications for the position rendered vacant by the transference of our present assistant-

editor from England to Australia. Correspondents on this subject are requested to be very explicit as to their past history and qualifications. They will also be good enough to say whether, if required, they will be willing to remove to Australia. For other particulars reference to the advertisement is necessary.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of salts. It is to be submitted to a thorough systematic examination, designed to detect all the constituents of the mixture, and to show that no other substances are present. In reporting, each student is to give a brief account of the work done, with a list of the metals and acid radicles detected, distinguishing those which may be regarded as accidental impurities.

Applications for a portion of the mixture should be sent in not later than the 19th inst. The samples will be forwarded on the 25th.

Students' reports will be received up to October 15.

REPORTS.

The mixture of salts which formed the subject of the last exercise consisted of equal parts of:—

Calcium phosphate.
Magnesium carbonate.
Potassium nitrate.

100 parts of the mixture therefore contained:—

Ca	..	..	..	..	..	..	12.90
Mg	..	..	..	..	..	..	9.52
K	..	..	..	..	..	..	12.87
PO ₄	..	..	..	..	..	..	20.43
CO ₃	..	..	..	..	..	..	23.81
NO ₃	..	..	..	..	..	..	20.47
							100.00

The only impurities of any note were traces of chlorine and of the sulphuric radicle.

The total number of reports sent in by students this time was so small that it would be useless to generalise upon them.

It would seem, however, as might be expected, that the chief difficulty our correspondents had to encounter arose from the presence of a phosphate. When an acid is employed for the purpose of bringing a solid into solution, one must consider what will happen in the course of an analysis when the acid is neutralised by the addition of an alkali. It may be that the acid has effected a permanent change in the solid dissolved in it, in which case the neutralisation of the acid cannot lead to the reproduction of the original solid. Suppose, for example, that the solid under examination is calcium carbonate, and that it is dissolved in hydrochloric acid, a decomposition takes place, and we are now dealing not with a solution of calcium carbonate, but with a solution of calcium chloride. If ammonia is added there is no precipitate, because the carbonate cannot be reproduced, as the carbonic radicle has disappeared, and ammonia is unable to disturb the union between calcium and chlorine. Suppose, on the other hand, that the compound under examination is calcium phosphate; for the purpose of analysis it is dissolved in hydrochloric acid, the phosphoric radicle is not displaced, and we have to deal with a true solution of the original solid. When the acid is neutralised by the addition of ammonia

the calcium phosphate, being insoluble in a neutral or alkaline liquid, reappears in the form of a precipitate. The inexperienced student frequently mistakes this precipitate for aluminium hydrate. Now, until the phosphoric radicle is removed the ordinary tests for the metals that may be associated with it cannot be applied, hence a special course must be adopted. There are several salts of less frequent occurrence, such as oxalates, borates, and others, which behave in a similar manner. We must refer students to works on analysis for the details of the methods to be pursued when such salts are present. In a few cases our correspondents failed to detect phosphoric acid by means of the molybdic test. It would be impossible to point out the precise cause of the failures. There can be little doubt that the student who takes the trouble to study the test experimentally, and to make himself practically acquainted with the conditions to be observed, will have no difficulty in obtaining accurate results with this very sensitive and valuable test.

PRIZES.

The First Prize for the best analysis has been awarded to
EMIL A. WERNER, 5 Church Avenue, Rathmines, Dublin.

The Second Prize has been awarded to
W. R. BEER, 8 High Street, Canterbury.

Marks Awarded for Analyses.

E. A. Werner (first prize)	..	95	W. D. Lovday	..	..	65
W. R. Beer (second prize)	..	85	"Prospect"	..	..	60
"Experientia docet"	..	80	J. B.	..	..	40
I. E. Bury	..	75	C. R. Gilson	..	..	40
J. D. Turney	..	75	"Oswestry"	..	..	35
R. P.	..	65	T. W. Backhouse	..	..	30

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

. All communications should include the names and addresses of the writers.

W. R. Beer.—An analysis cannot be considered complete without the preliminary blowpipe examination. The acid radicles require more attention than you gave them.

Experientia Docet.—It will repay you to make a careful experimental study of the detection of nitric acid. You used a solution of ferrous sulphate. It is better to use this reagent in the solid form, as its solution in water rapidly oxidises.

I. E. Bury.—It must have been sulphur that you mistook for the sulphide.

J. D. Turney.—The precipitate produced by ammonia consisted of calcium phosphate, and when you obtained a precipitate with sodium acetate in the supposed presence of an excess of acetic acid, the solution must have been in reality alkaline. The precipitate with calcium chloride which you attributed to citric acid was caused by phosphoric acid.

R. P.—Your observation on the several blowpipe tests—"nothing definite," was surely not altogether warranted. You ought to have observed the absence of water if no water condensed in the tube, the absence of a metallic bead, and of an incrustation, the luminosity of the mass when heated, and the absence of colour in the borax bead. The importance to be attached to each of these observations would, of course, depend on your skill and experience.

Prospect.—Did it not occur to you as strange that a white powder should contain manganese, cobalt, and nickel? Your first examination of the ammonia precipitate goes for nothing, as the presence of phosphates was not taken into account. In testing for ammonia the calcium compound to be employed is the hydrate (slaked lime), not the chloride.

J. B.—The addition of sulphuric acid to a solution containing much calcium would cause a precipitate of calcium sulphate unless the acid was sufficiently dilute. It is safer to use a solution of calcium sulphate, which

for obvious reasons will not cause a precipitate if calcium alone is present, but will if there is strontium or barium in the solution.

C. R. Giltson.—The air of the room in which your analysis was made may at the time have contained enough ammonia to produce the effects you observed.

Oswestry.—Try the effect of heating calcium phosphate, moistened with cobalt nitrate, on charcoal, and compare the colour of the mass with that obtained with alumina under similar conditions.

T. W. Backhouse.—You probably employed too little ferric chloride to separate all the phosphoric acid. You omit the details of your examination for the acid radicles.

Provincial Reports.

BIRMINGHAM.

Notes written for THE CHEMIST AND DRUGGIST.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

On Wednesday, August 12, this Association held their first annual excursion to Stratford-on-Avon. The party travelled from Birmingham in special carriages by the Great Western Railway. On arriving at Stratford, Flowers' Brewery was first visited. This amply repaid the trouble and time taken to go over it. The process of brewing was explained, and "mild, bitter, and strong" were sampled, and pronounced to be very good.

After leaving the brewery the majority went to the Cricket and Rowing Club Ground, where a cricket match, Married v. Single, was played. The following is the score:—

SINGLE.

Mr. Alcock, b Perry	24
Mr. Lowther, b Drew	2
Mr. Ground, c Grant, b Perry ..	2
Mr. Boucher, b Drew	3
Mr. Tulitt, b Drew	8
Mr. Eley, b Drew	5
Mr. Taylor, c Grant, b Drew ..	5
Mr. Peacock, b Drew	6
Mr. Bryan, not out	40
Mr. Crooke, b Drew	1
Mr. Parkes, b Robinson	12

MARRIED.

Mr. Fernday, b Alcock	2
Mr. Ellis, b Alcock	0
Mr. Drew, not out	21
Mr. Grant, not out	14
Extras	16
Messrs. Perry, Bar'ow, Robinson, Lear, Holld, H. W. Jones, and W. Jones, to bat	

108

55

Several lawn-tennis matches were played, photographs of the party were taken by amateurs, and visits were paid to the river, the Memorial Theatre, Shakespeare's house, &c.

At six o'clock a tea was provided for 59 members, the President and Vice-president occupying the posts of honour.

At a meeting of Council of the Association, held on August 26, the following officers were nominated for appointment to the Executive of the British Pharmaceutical Conference for 1886:—Vice-president, Mr. Thomas Barclay; Member of the Executive, Mr. George E. Perry; Auditor, Mr. Charles J. Arblaster; Local Secretary, Mr. Charles Thompson.

It was decided to arrange a series of lectures for the usual monthly meetings, and that the classes for students should re-commence on October 5, with the following lectures:—

Preliminary—Mr. Stokes Dewson, Ph.C. Minor—Chemistry, Mr. Stokes Dewson, Ph.C.; Botany and Materia Medica, Mr. F. H. Alcock, F.C.S., Pereira Medallist; Pharmacy, Mr. George E. Perry, Ph.C. Major—Chemistry and Physics, Mr. A. E. Robinson, F.C.S.; Practical Chemistry, Mr. A. E. Robinson, F.C.S.; Botany and Materia Medica, Mr. Stokes Dewson, Ph.C.

Full particulars of these classes may be obtained on application to the honorary secretary, Mr. Charles Thompson, Sparkbrook, Birmingham.

The annual meeting of the Association is to be held at Burlington Chambers, Birmingham, on Wednesday, September 23.

POLICE PROSECUTIONS UNDER THE ARSENIC AND PHARMACY ACTS.

At the Birmingham Police Court on Wednesday, September 9, before T. C. Kynnersley (stipendiary magistrate), Messrs. George Tubbs and Frank Wilkins, trading as "Tubbs

& Wilkins," drysalters, &c., Hockley Hill, Birmingham, were charged under five summonses in respect of the sale of 1 lb. of arsenic to a man named Thomas Tobin, under circumstances fully described in this journal last month. The summonses charged the defendants (1) with not having entered the sale in a book in the form prescribed; (2) with not having coloured the arsenic; (3) with having sold a quantity uncoloured of less than 10 lbs. weight, it not being represented that the soot or indigo would render it unfit for the purpose required; (4) with not having obtained the signature of the purchaser; and (5), under the Pharmacy Act, with not having duly labelled the package.

Mr. Edward Rowlands appeared on behalf of the defendants, who pleaded "Not guilty."

The purchase and the various charges having been proved, Mr. Rowlands admitted that a complete case had been made out against his clients, and he could only address the Bench in mitigation of the fine. He said he doubted whether the Arsenic Act had ever as much as been heard of by half the drysalters of Birmingham. It was a constant usage in the trade to sell arsenic, which was used by jewellers, without getting the purchaser to sign the poison-book. He had himself purchased arsenic enough to poison 60,000 people, without, except in one instance, being required to sign the book. His clients were truly sorry that they had been the unconscious instrument of Tobin's death, but at the same time it was hardly to be supposed that a man would purchase such a large quantity of arsenic with the intention of committing suicide. It would be like buying an 80-ton gun to blow one's brains out with. His clients had *bonâ fide* believed that they were engaged in wholesale transactions, but in future they would be more careful, and strict register of such sales would be kept.

The Stipendiary: Do I understand you are asking for only one penalty?

Mr. Rowlands: They can only ask for one, sir.

Magistrate's Clerk: We have issued five summonses, and we could ask for five penalties; but we shall be content with one penalty and the costs of the other summonses.

The Stipendiary: Your clients must exercise more caution in dealing with poisons; it is quite necessary that the Act of Parliament should be complied with; they must pay a penalty of 5*l.* and costs in the summons heard, and also the costs of the other four summonses which the police authorities have consented to withdraw.

Notwithstanding the Triennial Musical Festival, held in this town for the benefit of the General Hospital, with the influx of aristocratic and noble families attending, we regret we are not able to report any improvement in the general depression of trade for the past month. The proceeds from the concerts were nearly 2,000*l.* less than the last Festival yielded, which seems to prove that money is less abundant in other than mere trading circles.

"Lewis" gigantic stores, Bull Street and Corporation Street, are advertised to be opened on Tuesday, September 22. The premises are seven storeys high, towering above all other buildings, and the ground-floor of shops, containing upwards of thirty large plate-glass windows.

In your June issue mention was made of a "cutting" chemist launching out with peppermint lozenges at a cheap rate. With the usual pertinacity characteristic of grocers, one of their body has started a line of the same goods, branded "Extra strong," which are retailed 6*d.* per lb., or 3*d.* per lb. under the chemist's price.

It will be noticed that, although no public proceedings were commenced, either by the Chemists' Trade Association or the Pharmaceutical Society against Tubbs & Wilkins, the sellers of the pound of arsenic with which the purchaser committed suicide, a prosecution has been instituted, and that successfully, by a public body totally unconnected with pharmacy. During the evidence given at the trial "quite a sensation" was produced in the Court when Mr. Rowlands showed package after package of arsenic, which had been purchased the previous day from the leading chemists of the town, and in no single instance had the Act been fully complied with. One package had not the name "arsenic" on the label, and in only one transaction had the signature of the purchaser

been asked for by the seller. The stipendiary requested that particulars of the cases should be given to the police, when they would be inquired into. The remainder of the pound purchased by Tobin was also produced; the poor fellow had taken quite 6 oz. from it.

The pamphlet "Notes on the New British Pharmacopœia, 1885," issued on September 3 by Messrs. Southall Bros. & Barclay, is most comprehensive and instructive, showing at a glance the new remedies introduced, with doses and remarks concerning them, also alterations of names, omissions, &c., of the B. P. late in general use. Great credit is justly due to the compilers of the pamphlet.

Mr. Dixon, corner of Park Lane and Aston Road, has purchased the business of the late Mr. J. Harper, carried on at Potter's Hill, Aston.

Readers of the Obituary column in your pages must have repeatedly noticed the early ages at which so many of our fraternity are removed by death. We have to announce another such case. Mr. Joshua Harper died last month of pleuro-pneumonia at his private residence, Oakfield House, Trinity Road, Birchfields, in the prime of life, after only five days' illness. Mr. Harper was born at Meriden, Warwickshire, and was apprenticed to the late Mr. Barnett, chemist and grocer, Jamaica Row, of this town. He was afterwards assistant with Mr. J. Parker, High Street, Aston New Town, which business he subsequently purchased. Mr. Harper was a successful business man, and had opened branch establishments in Phillip Street and Potter's Hill, all being carried on up to the time of his premature death. He was a pattern chemist and a highly-esteemed citizen. A widow and six children survive him.

BLACKPOOL.

DESTRUCTION OF A CHEMIST'S SHOP.—Mr. Jackson sends us the following corrected and fuller account of the remarkable accident briefly mentioned by us last month:—"The facts were these: My assistant was sealing the cork of a 4-gallon tin containing about 2 gallons of pure spirit, when either through some flaw in the cork or the neck of the tin, some of the blazing wax dropped in the spirit, which of course at once caught fire, the can immediately bursting at the joints. The blazing spirit ran over the shop, which was all aflame in a few minutes; the whole of the contents were soon destroyed, five large sheets of plate-glass and five 10-gallon carboys being soon literally in atoms, and one of the handsomest chemist's shops in the provinces in ruins in the space of ten minutes. Fortunately, by the promptness of the fire-brigade, the store-rooms and cellars were saved, the damage being about 700*l.*, which was covered by insurance. I write this more as a caution to young assistants and apprentices. Perhaps the ludicrous may seem out of place, but I should like to say, as showing the ideas of people, that some of my neighbours, seeing the contents of my carboys running in the gutter, got cups and proceeded to secure as much as they could, thinking, I suppose, it must be physic."

BILSTON.

POISONING BY CARBOLIC ACID.—On Friday, August 21, a young man named John Killaney committed suicide by drinking a quantity of carbolic acid. The deceased had been suffering from fever, and the carbolic acid had been obtained to disinfect the room in which he slept. He died in a few minutes.

HULL.

THE CHEMISTS' ASSOCIATION.—The members of this Association, with some lady friends, took a day out on August 6. The party numbered about forty. They left Hull at 8.20 A.M., and reached Malton by rail, *via* Driffield, at 10. They drove to Castle Howard, and returned to Malton to dinner, which was spread for them in the Talbot Hotel. After dinner the party was photographed by Mr. B. M. Stoakes, who was one of the party. They left Malton for York at 5.25, and returned to Hull that evening. The trip was described as a great and grand success in every respect, and this is attributed to the exertions of the secretary, Mr. C. B. Bell.

GUERNSEY.

MR. ADOLPHUS COLLENETTE, who was partner for twenty-one years with the late Mr. Adolphus Arnold, in the firm of "A. Arnold & Co.," of 11 Commercial Arcade, Guernsey, has purchased from Mrs. Arnold her share in that business, and will henceforth carry it on in his own name.

RISHTON.

A **DISTRESSING** poisoning case has occurred at Rishton. Two children, the daughters of an operative named Oswald Milburn, were suffering from diarrhoea. Their mother stewed some poppy seeds and gave to each child three spoonfuls. The children died within twenty-four hours. At the inquest the jury returned a verdict that the children had died from the effects of the poppy seeds given to them by their mother in ignorance of their poisonous properties. The children were twins, one month old.

SCOTLAND.

A **CORRECTION.**—Our Scotch readers may have been amused at the name which we gave to their Spa last month, but for the benefit of those who did not see the joke we now state that Strathpeffer, not "STRATHPEPPER," is the name.

BANKRUPT.—At the Edinburgh Sheriff Court, on Aug. 13, Charles Billing, chemist and druggist, trading as "C. Billing & Co.," aerated-water manufacturer, 71 George Street, Edinburgh, appeared for examination in bankruptcy. No questions were asked, and the statutory oath was administered. Liabilities amounted to 752*l.* 14*s.* 8*d.*, and assets 423*l.* 5*s.* 3*d.* The bankrupt about a year ago disposed of his drug business in Queen Street, in order to devote his whole time to the manufacture of aerated waters, and the retailing of these, fruit syrups, seltzogene charges, and the like, at cutting prices. So far the public has been inappreciative.

COMPETITION and keen prices are having effect upon the Scottish aerated-water trade. Three or four failures have occurred during the past month.

THE REVERSE SIDE.—Hot holiday weather created a brisk trade, and recently compelled Joseph McBride, aerated-water manufacturer, Greenock, to start work before 6 A.M. The hour was not too early for the Factory Act Inspector, who paid a visit, discovered two women at work, and did not find an abstract of the Factory Act posted on the premises. Called upon at the Sheriff Court on August 17 to show the reason why, Mr. McBride's explanation was not considered satisfactory, and he was fined a guinea for each of the women and 12*s.* 6*d.* costs.

The Leith methylated spirit cases are likely, before we have heard the last of them, to shed a flood of light on the secrets of the Scottish whisky trade. A well-informed service paper, referring to recent prosecutions, says:—"It would seem that the practice of mixing the vile wood-spirit with ordinary coarse strong Scottish whisky is of wider range than the authorities at first imagined. The flavour which some of the coarse Scottish whiskies possess helps to disguise the unpalatable taste of the methylic spirit, and thus to assist the unscrupulous persons who carry on this illicit and fraudulent trade." We are informed that some months ago some methylated mixture was offered to at least one firm of rectifiers who do a large business with the drug trade. They refused to buy, because they smelt the wood-spirit in it. The statement that the practice is a common one is, we believe, erroneous.

SAD CASE OF POISONING.—A melancholy case of poisoning by misadventure occurred on Sunday, August 23, the victim being Mrs. J. G. McLean, who resided in Gourrock. It seems that she had been on a visit to her brother, Mr. John Warden, at 35 West Burn Street, Greenock, and on Saturday night she had sent her son (a young lad) to a chemist's (Mr. George Armitage, Hamilton Street) for a pennyworth of compound liquorice powder. She took the medicine, and at once showed symptoms of poisoning. Dr. Black was called in with all speed, but his services were of no avail, and the poor woman died in twenty minutes after she had swallowed

the fatal dose. On examining the remains of the medicine, Dr. Black declared it to be *nux vomica*. The matter has been reported to the Procurator Fiscal for investigation.

THE ADMINISTRATION OF NARCOTICS TO CHILDREN OF TENDER AGE.—In Hamilton Sheriff Criminal Court, August 25, William Cooper, mason, Uddingston, was tried, before Sheriff Birnie and a jury, on a charge of culpable homicide, as also reckless and culpable administration of laudanum to a child of tender age. The libel set forth that on July 10 he administered four drops of laudanum to his now deceased son, a child five weeks old. Two neighbours, both elderly women, united in testifying that the child was pained and crying all the Friday night libelled, and that it was found by them in a state of insensibility on Saturday, while they heard the accused state to the doctor that he had at four o'clock on Saturday morning, to soothe the pain, given it four drops of laudanum. It died next morning about four o'clock. The witnesses testified further to accused's respectability, and to the distress of mind shown by him after he had discovered his error. The first of the witnesses said she had used laudanum, but never heard of a child of five weeks getting four drops. She understood the scale was a drop for each year. The other thought it was a drop for each week. The Fiscal: You would not like to take a drop for every week you are old?—I would not. (Laughter.) Dr. Crawford, Uddingston, gave his opinion that the child died from the effects of narcotic poison. In cross-examination, the doctor said the accused manifested great anxiety in the case, and followed out all his directions; and that, so far as he saw, his error was one of judgment and not of intention. Soothing syrups and other patent medicines of the same class were largely composed of morphia or laudanum, and fatal results often attended their use. The Sheriff: I take it you never heard of anyone being punished for giving a child soothing-syrup?—My knowledge of criminal procedure is not large, but I never heard of such a case. Would you think it a good thing to give soothing-syrup or such like compositions to a child of this age?—As a medical man, I would think it a very bad thing. At what age is it safe to give soothing-syrup to a child?—I do not think it safe almost at any age under a year old. He should say other homœopathic (? patent) medicines in bottles were also unsafe for mothers to give to children under a year old. Mr. W. T. Hay, for the accused, asked for an acquittal, and the Sheriff having summed up, the jury, after a minute's absence, returned a verdict of "Not Guilty." Accused was then set at liberty.

EXPLOSION OF METHYLATED SPIRIT.—On Saturday, August 22, an alarming explosion and fire took place in the premises of Crabbie & Co., Leith. The explosion occurred in a lockfast chamber used for the purpose of storing wood-spirit. The spirit is kept for a short period only (while samples are examined at Somerset House), in a leaden vat within the chamber, and, when approved, is transferred to the methylating chamber. At the time of the explosion the vat was empty, and had been so for some weeks; the room was locked, and there was no naked flame in the vicinity. The explosion as well as the fire caused considerable damage. Insurance company's officials were slow to admit the possibility of spontaneous combustion, but they ultimately admitted the claim. Druggists frequently have occasion to notice how forcibly bungs are expelled from empty methylated-spirit jars, and we may remind our readers that several oxidation products of wood spirit are gaseous at the ordinary temperature, and are highly inflammable.

A PRESCRIPTION for half-a-dozen 20-grain salicylate of soda powders was taken to a cutting drug-store in Edinburgh the other night. The messenger had only 6*d.*, but was sent home for other 3*d.*, as the medicine was a *very expensive article*. As the same price would have been charged in the biggest shop in Princes Street, we wonder where the cutting comes in.

MATTHEW G. COLTHART, chemical manufacturer, was examined on August 27, before Sheriff Graham, Glasgow, in reference to his sequestration. A year ago he commenced business with a capital of 1,000*l.*, and traded as "Macallister & Colthart." Now the state of affairs shows liabilities 4,210*l.* 17*s.* 10*d.*, and assets 619*l.* 4*s.* 4*d.* The difference is due to depreciation of plant (bought at 8,730*l.*, now scarcely

half that value) and bad markets. The oath was administered.

THE autumn meeting of the Iron and Steel Institute was opened in Glasgow on September 1, under the presidency of Dr. John Percy, London. Amongst the papers of interest to chemists was one on the "Processes for the Recovery of Tar and Ammonia from Blast-furnaces," by Mr. William Jones, Langloan Ironworks. He stated that the recovery of tar and ammonia from blast-furnaces fed with raw coal has now been brought to considerable perfection. He described the methods at the Gartsherrie Ironworks, Coatbridge, and the Lugar Ironworks and Muirkirk Ironworks, Ayrshire. When all the processes are developed and extended, he calculated that the probable make of sulphate of ammonia from blast-furnaces in Scotland would be some 4,000 tons per annum; and if the whole of the gases of all the furnaces at present in blast in Scotland were being treated for ammonia, the turn-out of sulphate of ammonia would be only some 18,000 tons per annum, equal to 22 per cent. of the present production of Great Britain. A discussion on the paper took place on the following day, and, in the course of his reply, Mr. Jones said that, if all the blast-furnaces in Scotland were to recover tar and ammonia from waste gases, say to the extent of 12 gallons per ton of coal, there would be secured 7,360,000 gallons of oil, and 65 tons of benzole.

HAWICK.—A cottage hospital and dispensary was opened here on August 29 by the Duchess of Buccleuch, in presence of a distinguished company. Her Grace was received in the dispensary by Mr. Thomas Maben, who explained to her the working of the establishment, and dispensed for her the first bottle of "medicine." The Duchess graciously accepted the rôle of first patient. We may explain that the "medicine" took the form of a case of perfume.

THE Glasgow chemists have lately consulted together in a general meeting of the trade respecting patent medicine competition, and have resolved to come down to the 10½*d.* standard.

F I R E S .

A serious fire occurred at the Morgan Crucible Company's extensive works, Church Road, Battersea, on the morning of August 26. Through the overheating of the kiln a building of three floors, about 55 feet by 55 feet in dimensions, and used as a manufactory, was set on fire. The workmen, as soon as the news of the mishap spread, got the hose on to three of the private hydrants fitted upon the premises, and were assisted by the employés of the adjoining firm of Messrs. May & Baker, who fitted the hose to one of their stationary engines and poured water upon the flames. Engines from Clapham, Brixton, Wandsworth, Tooting, Kennington, and Waterloo Road, in addition to the Battersea steamer, were turned out, and, although the supply obtained from the mains of the Southwark Company was for some time a short one, the working of the firemen and employés at last began to tell. In the course of an hour the fire was extinguished.

On the evening of August 28 a very destructive fire occurred at the branch surgical-instrument factory of Messrs. S. Maw, Son & Thompson, situated in Hare Court, Aldersgate Street. With some difficulty the workpeople in the factory were all rescued, but not until the flames had got a strong hold. The whole building of four floors, each about 70 feet by 25 feet, was burnt out, and the roof destroyed. The contents were insured in the Atlas and Imperial offices. The cause of the fire is unknown. Messrs. S. Maw, Son & Thompson wish it to be understood that this fire did not occur in their chief premises, where the finer descriptions of surgeons' instruments are manufactured, and where the stock is kept, nor did it interfere with the execution of orders. Some forty hands were temporarily thrown out of employment, but arrangements have already been made to recommence work.

THE SIXTH

International Pharmaceutical Congress.

BRUSSELS, AUGUST 31 TO SEPTEMBER 5.

READERS of this journal have been kept sufficiently informed of the arrangements for the sixth Pharmaceutical Congress, which has lately completed its labours at Brussels. We may, with all modesty, put forward a claim of having helped to make this Congress a success, if not even a possibility. Last year it was announced that the Belgian pharmacists were indisposed to accept the responsibility which had been thrust upon them of organising this Congress, and finding the funds for doing it well. In commenting upon their reasonable reluctance we mentioned the general English feeling of a desire not to be "entertained," and urged that an inclusive charge should be made to everyone who should take part in the business and festivities. Our remarks were quoted and endorsed by a leading German journal of pharmacy, and reported in the Belgian publications. Adopting our suggestions the Brussels pharmacists formed a committee

lege of journeying to Brussels and back on any of the Belgian lines at half rates. And, finally, we may add that they threw into the enterprise an amount of labour and enthusiasm which made success inevitable, but which in turn is likely to terrify the organisers of future Congresses. Anyone eager for an honorary secretaryship of another International Congress should, before undertaking it, ask Mr. Van de Vyvere to show him the mountains of correspondence which have been involved in this one.

The majority of the English visitors travelled *via* Dover and Ostend. For two or three days immediately preceding the Congress, winds and waves assumed an unfriendly attitude, and in many cases Neptune took a heavy toll from pharmaceutical Britons, who found that neither their sedatives nor their stimulants had any more control over the revolutionary regions within than they themselves had over the tumultuous waves without, which they so arrogantly claim to rule.

The first of these International Congresses met at Brunswick in 1865. The purpose first named for the assembly was the repression of the secret medicine trade. But many other subjects were discussed. In 1867 a rather large Congress met at Paris, and it was here that the International Pharmacopœia was first decided upon. Vienna was the meeting place in 1869, and St. Petersburg in 1874. London, as we all recollect, received the fifth Congress in 1881, and in this outside corner of Europe a more universal character was attained than had previously characterised the assemblies. In regard to numbers, as well as to the extent of the programme, however, Brussels has as far outstripped London as London had advanced beyond its predecessors. Only in respect to internationality was Brussels not a success. The French language was almost exclusively used, and, though interpreters had been provided for every section, very little use was made of them. No attempt was made to secure representative speakers in the different languages. Both English and Germans were remarkably quiet throughout the meeting, and French orators and French ideas held sway from beginning to end.

England was represented, so far as we observed, by Messrs. Atkins (Salisbury), Bayley (Saltaire), Bottle (Dover), Bremridge, Butt, Carteighe, Greenish, Lescher, Luff, Maitland, and Redwood (all of London), Wrenn (Taunton), and Young (Barnet).



M. VAN DE VYVERE (SECRETARY GENERAL.)

and drew up their plans. They appear to have obtained material as well as moral support from their Government, and the City Council also gave its sympathy and aid. They fixed the charged for "adhesion" at the very modest sum of 10 francs, which was more than saved at starting by the privi-

The Irish contingent was perhaps the largest in proportion to population from any country. It comprised Messrs. Brunker, Draper, Quinlan, and Tichborne.



MR. J. E. BRUNKER, M.A. (PRESIDENT OF THE IRISH PHARMACEUTICAL SOCIETY.)

For the United States Messrs. Creuse, Stearns, and Seabury put in appearances. Mr. Creuse was formerly the editor of the *Druggists' Circular* of New York, but is of French birth,



F. STEARNE.

and now resides at Paris. Mr. Stearns, the head of the famous firm of F. Stearns & Co., of Detroit, was just finishing up a Continental tour, and Mr. R. Seabury was just beginning one.

The names of many of the representatives of other countries will occur in the report.

Very abundant provision of subjects had been made by the Provisional Committee. Several bulky reports had been already printed, and were supplied to the members, besides a "Bulletin" containing a summary of the proceedings of

each day, and a programme for the next day was printed in the course of the night and posted to every visitor at his hotel. The discussions were taken partly in sectional meetings in the morning from 9 to 11.30, four sections proceeding at once in different rooms, and partly in general assemblies, which were held in the Salle des Fêtes in the afternoons from 2 till about 4.30 p.m. MM. Van de Vyvere, Dryon, and Victor Reding, secretaries, and M. Daenen, treasurer, had no rest during the Congress week, and we hope they are still enjoying the holiday which they all so well earned. MM. Chevalier and Delacre, jun., were always at hand to interpret from or to English, and they gave every sort of assistance with the utmost courtesy. Probably many English chemists would like to see the portrait of M. Delacre, sen., the head of



M. DELACRE.

the principal English pharmacy at Brussels, and the founder and chief of large chocolate works in the neighbourhood, the productions of which have a world-wide renown.

We make no pretence to present anything like a complete report of the proceedings of the Congress. This, we understand, is to be published in course of time, and it will be a massive volume. But we have tried to give in the space at our disposal an accurate sketch, from an English point of view, of the most imposing gathering of pharmacists which has ever been held.

The following were appointed and called to the platform:—

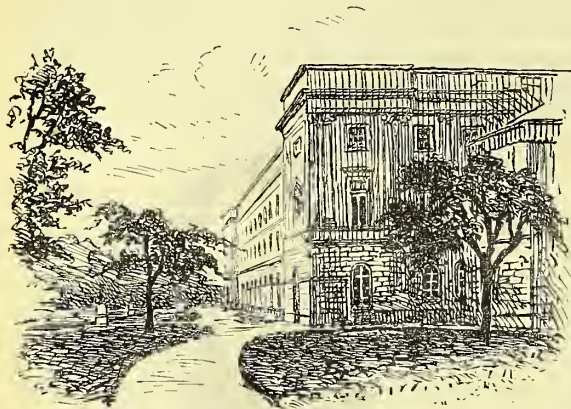
AUSTRIA	M. von Waldheim
DENMARK	Lotze
FRANCE	Petit
GREAT BRITAIN	Carteighe
GREECE	Bratimos
IRELAND	Brunker
ITALY	Mosca
MONACO	Colignon
ROUMANIA	Brettner
RUSSIA	Dragendorff
TURKEY	Zanni

A specially hearty reception was given to M. Dragendorff.

The appointments for Germany, the United States, Spain, Luxembourg, Portugal, Sweden, Norway, and Switzerland, were left over.

THE OPENING CEREMONIES.

ON Monday, August 31, at 2-30 P.M., the members of the Congress assembled in the Palais des Académies, a fine square building in the Rue Ducale overlooking the park. The use of this palace had been specially granted by the Government, and no more splendid or convenient tabernacle for the homeless Congress could be conceived. The palace is devoted to



PALAIS DES ACADEMIES.

the sessions of the Medical and Scientific Academies, who each have their special sections, while a magnificent central "Salle des Fêtes" is used by each for its general assemblies. It was in this hall that the opening ceremonies were held. There had been at one time some hope that the King of the Belgians, the "High Protector" of the Congress, would have himself occupied the chair at the opening, "whom failing," as the lawyers say, his brother the Count of Flanders, "first honorary president," was looked for. Next to him in order of dignity were placed M. Thonissen, the Minister of the Interior and of Public Instruction, M. le Chevalier de Moreau, Minister of Agriculture, Industry, and Public Works, both "honorary presidents," and M. Buis, the always popular Burgomaster of the city "honorary vice-president." The King's secretary, who can hardly owe his situation to his skill in making excuses, wrote to say that His Majesty regretted that his prolonged sojourn at Ostend would prevent him from assisting; the Count of Flanders left Brussels on the previous evening for Lucerne, and a general had to inform the Committee that Monseigneur regretted that absence from the country kept him away. Ministers Thonissen and Moreau were also absent, but the goodwill of the Government was manifested by the appearance very punctually of no less a personage than M. le Prince de Caraman-Chimay, Minister of Foreign Affairs, who was accompanied by M. Vergote, the Governor of Brabant, the sheriffs Walravens and Becquet, who represented the Burgomaster, M. Beco, the acting official in the Ministry of Public Instruction, M. Devaux, the Government delegate, and M. Crocq, a senator. These were received by the Provisional Committee, and as they entered the hall an orchestra concealed behind masses of foliage and flowers at the back of the platform struck up the strains of the "Brabançonne," the national air of the Belgians. To this followed the "Watch on the Rhine," the "Marseillaise," "God Save the Queen," the Austrian, and other national hymns.

Next the Prince of Caraman-Chimay rose and read a short address, welcoming the visitors, and expressing his sense of the great interest and importance of the subjects of discussion. The importance, he said, was manifested by the fact

that foreign Governments had delegated to this Congress their most eminent *savants*. The question of potable waters was most serious, and society was looking anxiously for pharmacists to find means of neutralising the pernicious action of microbes. He would not venture further on this ground, but



THE MINISTER OF FOREIGN AFFAIRS.

he concluded by urging his audience to work in the public interest, for the progress of the future is dependent on scientific labours. Then he declared the Sixth International Pharmaceutical Congress open.

The orchestra then played the overture to "Jeanne d'Arc," and, after M. Van de Vyvere (the honorary secretary) had read some of the principal letters of excuse,



THE PRESIDENT.

M. van Bastelaer, President of the Provisional Committee, rose amid loud cheers and read a short introductory address, occupying about fifteen minutes. After thanking "our véné-

rated and well-beloved sovereign Leopold II." and his Ministers, and all the other authorities, he welcomed the *savants* who had come from all the countries of the world in answer to the appeal of Belgian pharmacy. Then he touched upon the topics put down for discussion, and expressed his belief that important results would follow from that Congress. Lastly, as justifying the choice of Belgium for this Congress, he recounted briefly what some eminent Belgian pharmacists had done. Stassius in 1571, Salpêteur in 1683, Adrien Binche in 1698, and Batus in 1711, had all worked on the analysis of water. They all made public demonstrations with the object of exploiting certain mineral springs. Caudenberg, of Louvain, wrote in 1568 a didactic work on pharmacy, entitled "Scholia"; Van Mons, a Brussels pharmacien, did great service to the cultivation of pears; Minkelers, of Maestricht, in 1783 lighted his lecture theatre by carbonated hydrogen, eight years before the introduction of gas for lighting by Lebon and Murdoch; Desaire, of Liège, in 1784 proved the composition of the air, ten years before the famous work of Lavoisier.

On the proposal of M. Van de Vyvere, the Council of the Congress were appointed by acclamation. The members proposed by the Provisional Committee were as follows:—

S.M. Leopold II., High Protector.

S.A.R. Mgr. le Comte de Flandre, first Honorary President.

MM. Thonissen, de Moreau, le Prince de Caraman-Chimay, Ministers, Honorary Presidents; MM. Vergote, Governor of Brabant, and Buls, Burgomaster of Brussels, Honorary Vice-Presidents.

MM. Walravens and Becquet, sheriffs; Beco, Chief of the Cabinet of the Minister of the Interior and of Public Instruction; A. Chandelon, Professor Emeritus of the University of Liège; Crocq, Senator Member of the Academy of Medicine; J. B. Depaire, Professor, &c.; J. B. Gille, Pharmacien-en-chef of the Army; N. Gille, Professor at the State Veterinary School, &c.; Kuborn, President of the Royal Academy of Medicine; Melsens, Emeritus Professor of Chemistry at the Military School; J. Stas, chemist, President of the Central Jury of Pharmacy, &c., honorary members.



THE FIRST FOREIGN VICE-PRESIDENT.

M. van Bastelaer then asked the various nationalities present each to select a Vice-President. But first of all he asked the Congress to appoint on the Council Professor Redwood, of London, President of the fifth Congress. This

proposal was received with hearty cheers, and Professor Redwood ascended the platform.

At the general meeting on the next day the following were added to the bureau as vice-presidents:—

AUSTRIA	..	..	..	..	{ M. Findler, official delegate of the Government
DENMARK	..	..	..	..	M. Madsen
ENGLAND	..	..	..	..	Mr. Greenish
GERMANY	..	..	..	..	{ Drs. Brünengrüber and Schacht
HOLLAND	..	..	..	..	{ M.M. Ankersmit and Wefers-Bettinck
HUNGARY	..	..	..	..	M. Török
ITALY	..	..	..	..	M. Cannizzaro
RUSSIA	..	..	..	..	M. Forsmann
UNITED STATES	..	..	..	..	M. Creuse

On the motion of M. Godeffroy, the President of the first Congress, M. Dittich, was added by acclamation.

Subsequently the following were appointed honorary vice-presidents:—C. Mehu (France), W. Sebardt, and P. Grau (Sweden), G. Hansen and M. Walter (Norway), and Dr. F. Iparraguirre (Spain).

The proceedings were then broken by a performance of a fantasia on Wagner's "Lohengrin."

M. van de Vyvere read the report of the Provisional Committee, first sketching the history of the preceding Congresses. He stated that the King and the Ministers had shown the warmest sympathy with their work, and had expressed their earnest desires for the success of the undertaking; several foreign Governments were officially represented; delegates had been sent from more than seventy academies, universities, schools, and societies, and in all the adhesions reached nearly 700—Australia, Chili, the islands of St. Thomas and Cuba, the United States, and New Zealand, besides the countries of Europe furnishing members. The Provisional Committee had now finished their labours and resigned their mandates.

On the proposal of M. Mehu they were asked to continue their services as Executive Committee. This proposition was adopted unanimously. After some formal announcements the ceremonies of the first session were completed, and the orchestra played a fantasia on "Carmen" as the audience separated.

The members on the platform were all in full ceremonial toilet, many of them wearing medals, stars, and other decorations. The whole audience numbered nearly 300, including about twenty ladies, who watched the proceedings from a side balcony. The proceedings occupied two hours.

We proceed to give a summary of the principal subjects of discussion.

PHARMACEUTICAL SPECIALTIES.

By M. Zanni, Constantinople.

M. ZANNI'S paper brought together in very spirited language the familiar abuse of *les spécialités pharmaceutiques*, or, as we comprehensively term them, "quack medicines." Now that authoritative voices in all quarters denounce the deceptive advertisements in the journals of this or that specific destined to cure all the ills of humanity, our dignity, he said, ought to urge us to cease to act as the depositories of these marvellous panaceas.

The stock of these pseudo-pharmaceutic preparations, with their brilliant wrappers, in their variously-shaped bottles, and enveloped in their many-coloured prospectuses, substitute a theatrical and fantastic aspect of our pharmacies for the severe scientific simplicity which should characterise them.

We see in them now a pell-mell variety of compounds: a hair-regenerator, a beauty water, capsules "that cure in three days," dentifrices, and remedies of all sorts, to cure promptly even diseases which science cannot yet comprehend.

Many people, especially in the East, accept all these assertions readily. The proprietors often realise colossal fortunes. France is the principal home of the products, and

the business there is one of great commercial importance; but those who have made it have degraded and destroyed the prestige of that profession which the science of Theophrastus and of Dioscorides ennobled.

In 1875, in the National Assembly, M. de Lorgeil estimated the annual sale of these specialties in France at 130,000,000f., and the exportation at a further 20,000,000f. Dr. Lereboullet says these figures are far below the reality, and that the exportation amounts to 105,000,000f. "England also receives 60,000l. to 70,000l. annually for patent medicines under this head." [It is not clear what figures Mr. Zanni here quotes. The sentence in the original reads: "L'Angleterre encaisse aussi, tous les ans, 60 à 70,000 livres sterling pour patentes délivrées de ce chef."] After some more remarks on the extent of the business and the general worthlessness of the preparations, M. Zanni says that it is more than time that this blatant quackery should be checked, if not entirely extirpated. Pharmacists by selling these remedies, and lending their names as depositories, injure themselves and their rightful businesses.

Thanks to favourable treaties of commerce, Europe and America have during the past thirty years flooded Turkey with an avalanche of specialties. The pharmaceutical body has protested in vain; but, notwithstanding disappointments, the young Pharmaceutical Society of Constantinople will continue the contest.

The specialty is to a great extent the result of the non-limitation of pharmacies leading to a wild competition. Success followed the first efforts, and pharmacists, physicians, and people ignorant of all medical science have become inventors of these remedies.

M. Zanni does not wish to attack the special manufactures of alkaloids or of preparations for which a brand is created. He alludes to the pilules, syrups, and such like,



DR. JOSEPH ZANNI.

which the pharmacist can make as well, and often better, himself; and he will not throw the stone at the pharmacist who imitates these products. If the physician wishes to prescribe capsules, far better is it that the pharmacist should fill these himself and guarantee the quality of the medicine, than trust to unknown and often inferior drugs. He urges on physicians the danger to their patients and to their own profession of prescribing these advertised remedies.

The Pharmaceutical Society of Constantinople has taken this matter in hand seriously. The time for obtaining a repressive law is favourable, as the treaties of commerce with many European powers will soon have to be renewed. It is aimed to forbid the introduction of specialties bearing the label and seal of the foreign maker, and demands that these shall be substituted by the labels and seals of the pharmacists who sell them; and it is further claimed that

the Imperial Societies of Medicine and of Pharmacy shall form a joint commission charged with the duty of examining the chemical nature and therapeutic properties of all exotic remedies.

The discussion on Mr. Zanni's paper, which was read on the second day of the Congress, was particularly lively. Messieurs Creteur, Limousin, Capgrand, Mothes, Ferré, Bagelot, Petit, Dr. Fergneaux, Zanni, and Chassenent took part in it; and, no conclusion being reached, it was postponed for further consideration till the next morning. Then the assembly was very large, over 100 members attending the section. M. Zanni, who is a young-looking man, very dark, and with a singular facility and felicity of speech, won hearty applause for an animated oration, concise and logical. He wished to make some distinction between specialties, and was not quite so ferocious against *la spécialité* as some of his supporters had shown themselves. As a definite expression of opinion, he asked the Congress to resolve that all Governments should be asked to interdict the sale of secret remedies and pharmaceutical specialties not inscribed in officially-recognised formularies. That those of known composition should indicate on the label their real composition, and when sold should bear the seal of the pharmacist. And, lastly, that the Congress should name an International Commission, to be composed of pharmacists and physicians, to draw up a project of law to be brought before the next Congress and discussed.

M. Creteur, the President of the Royal Society of Pharmacy of Brussels, followed with a speech which was quite startling for its eloquence. M. Creteur has voice, gesture, passion all perfectly under control, while his elocution and choice of language appear to be simply perfect. Certainly he won the laureateship of the tribune at the Brussels Congress. To that part of his audience, however, who had not realised the enormity of the crime which hedged them



M. LOUIS CRETEUR.

about in this specialty commerce, the rhetoric seemed a little extravagant, and perhaps somewhat artificial. M. Creteur's denunciations of the patent-medicine business, it was fancied, were worthy of some grander offence. The specialty, in M. Creteur's view, is not pharmacy, is hardly even commerce: it is the assassination of science. But his proposal was a little less complicated, and somewhat more cautious than M. Zanni's. He simply asked for a resolution that the pharmacist should verify the quality of other people's specialties before selling them.

Mr. Zanni's proposal was too definite. No one wanted to take any real action. The meeting was only trying to formulate a decent phrase with which to wind up its discussion, and M. Creteur's was more suitable in this respect than M. Zanni's. But Dr. Fergneaux met the want better still. He offered the concise resolution that "This assembly desires to

see the absolute proscription of the pharmaceutical specialty." That sounded well, would look well in print, and especially had the valuable merit that there was no sort of danger of anything resulting from it. Consequently it was carried almost unanimously.

THE SALE OF POWERFUL MEDICINES.

DR. BÖTTGER, of Bunzlau, submitted a paper in reply to the question—Ought the sale of medicines by pharmacists to be limited by measures of medical police, and, if so, how can the interests of medical police, and at the same time those of the pharmacists, be best protected?

He thought there could be no rational doubt that some restrictions ought to be placed on the sale of violent poisons. But difficulty arose on the question of repeating the supply of powerful medicines once prescribed. At considerable length Dr. Böttger presented the laws in regard to the sale of poisons prevailing in many countries. Unfortunately, the English law was given in this paper on the lines of the recent Government Bill, the schedule, with its three parts, being printed entire. The author had assumed that the proposed law was the actual law.

The French regulations on the sale of medicines and poisons are formulated in Article 32 of the Act of the year XI., and in other Acts regarding the sale of poisons passed in 1845 and 1846. The first prohibits generally the sale by a pharmacist of medical products and secret remedies without the prescription of a physician. The Act of 1846 says that poisons for medical use can only be sold on the prescription of a physician; that these must be copied in a special book; that the prescription must be stamped by the pharmacist with his stamp and the date of supply; and that the label on the medicine must bear the name and address of the vendor as well as the use of the medicine. By a Ministerial Order, dated June 25, 1855, it is further provided that every medicine for external use shall be so described by a special label. Mr. Böttger then gave the opinions on this subject which a French Parliamentary Committee, with M. Naquet, Deputy, as reporter, issued in 1883, and which were referred to in THE CHEMIST AND DRUGGIST in July, 1883.

The German laws on this subject vary somewhat in different parts of the Empire, but all agree in limiting the supply of some violent medicines to the guarantee of medical prescriptions. In Prussia the number of medicines thus protected is 112. The only legal regulation applying to the whole Empire elaborated by the Pharmacopœia Commission provides that pharmacists can only supply the following on the special receipt of a recognised physician, surgeon, dentist, or veterinarian:—Emetics; subcutaneous injections; medicines for internal use, including also collyria, inhalations, enemas, and suppositories, containing any substance named in Schedule 1 below; and also medicines for external use named in Schedule 2 below, either in a simple or compound state, if the prescribed dose of such medicine exceed the half of the maximum dose indicated.

Schedule 1.—Acids arsenious and hydrocyanic, aconite and its salts, amyl nitrite, arsenic iodide, atropine and buciné and their salts, cantharidine, arseniate of quinine, chloral hydrate, chloroform (unmixed), colchicine, coniine and its salts, curare and its compounds, digitaline, digitalis leaves, homatropin and its salts, bichloride, biniodide and cyanide of mercury, hyoscyamine and its salts, hyoscyin, iodoform, cyanide of potassium, solution of arsenite of potash, arseniate of soda, nicotine and its salts, essential oil almonds, oils castor or phosphorated, phosphorus, physostigmine and its salts, picrotoxin, pilocarpin and strychnine and their salts, veratrine, cyanide of zinc.

Schedule 2.—Acet. colchici 3-0, acet. digitalis 2-0, acet. scillæ 5-0, apomorph. mur. 0-01, aq. amygd. amar. 2-0, argent. nit. 0-03, auro-natrium chloratum 0-05, bromatum hydratum 0-3, bromum, bulbus scillæ 0-5, butyl chloralum hydratum 1-0, cantharides 0-05, codeinum et ejus salia 0-05, euphorbium, ext. aconiti 0-02, ext. belladonnæ 0-05, ext. cannabis ind. 0-1, ext. colocynth. 0-05, ext. colocynth. co. 0-1, ext. conii 0-2, ext. digitalis 0-2, ext. fabæ calabaric 0-02, ext. gratiolæ 0-5, ext. hyoscyami 0-2, ext. hyoscyami e sem. 0-1, ext. ipecac. 0-3, ext. lactucæ virosæ 0-5, ext. opii 0-15, ext.

pulsatillæ 0-2, ext. sabinæ 0-2, ext. scillæ 0-2, ext. secalis cornuti 0-2, ext. stramonii 0-1, ext. stram. e semin. 0-05, ext. strychni aquos 0-2, ext. strychni (spirituosum) 0-05, faba calabarica 0-02, folia belladonnæ 0-2, folia joborandi 5-0, fructus colocynth. 0-3, fruct. colocynth. prep. 0-3, gutti 0-3, herba cannabis indic. 0-2, herba gratiolæ 1-0, herba hyoscyamy 0-3, herba lobeliæ 1-0, hydrarg. chlor. [calomel] 1-0, hydr. iod. 0-05, hydr. nitr. 0-02, hydr. oxyd. 0-03, hydr. præcip. alb., kali causticum fusum, kalium iod. 3-0, lactucarium 0-3, liquor ferri sesquichlor. 0-5, liquor hydrargyri oxyd. nit., morphium et ejus salia 0-03, narceinum 0-10, natrium jodatum 3-0, ol. sabinæ 0-1, opium 0-15, plumbum acet. 0-1, plumbum iod. 0-2, pulv. ipecac. opiatum 1-5, rad. belladon. 0-1, rad. gelsem. 0-3, rad. helleb. vir. 0-3, rad. ipecac. 1-0, rad. scammon. 0-005, rhizoma veratri 0-3, sapo jalapinus 1-0, secale cornutum 1-5, semen colchici 0-3, semen stramonii 0-3, semen strychni 0-2, sulfur iod., summitates sabinæ 1-0, syrup. opiatum 5-0, tartarus stibiatum 0-2, tinct. aconiti 0-5, tinct. belladon. 1-0, tinct. cannabis ind. 2-0, tinct. canthar. 0-5, tinct. colchici 2-0, tinct. colocynth. 2-0, tinct. digitalis 1-5, tinct. digitalis æth. 1-0, tinct. euphorbii, tinct. gelsemii 3-0, tinct. hellebori vir. 1-5, tinct. ipecac. 1-0, tinct. lobeliæ 2-0, tinct. opii crocata 1-5, tinct. opii simp. 1-5, tinct. resinæ jalapæ 3-0, tinct. scillæ 2-0, tinct. secalis corn. 1-5, tinct. stramonii 1-0, tinct. strychni 1-0, tinct. strychni æth. 0-5, tinct. veratri 3-0, tubera aconiti 0-10, tub. jalapæ 0-3, ung. arsenicale Hellmundi, ung. hydrargyri rubr., ung. tartari stibiatii, ung. veratrinii, vinum colchici 2-0, vin. ipecac. 5-0, vin. stibiatum 1-0.

There are two restrictions included in the foregoing:—(1) That certain substances can only be supplied on medical prescription, and (2) that a medical prescription for a powerful medicine can only be repeated with the knowledge and will of the prescriber. The author asked the Congress to declare that in the public interest, and not in the medical interest, the first of these restrictions is desirable. The second he discussed at some length. He argued against the theory that the prescriber had any right of property in his prescription, and against anything like a general law forbidding the repetition of prescriptions, but came to the conclusion, and asked for the endorsement of the Congress, that the repetition of the following classes of prescriptions only should be prohibited:—Those containing solutions of morphia; those in which doses exceeding the maximum doses named in the Pharmacopœia table are ordered; and those prescribed for internal use, as well as injections, inhalations, enemas, &c., which contain any of the following substances:—Arsenious acid and arsenical preparations, aconite and its salts, nitrite of amyl, atropine and its salts, chloral hydrate, chloroform, coniine and its salts, digitaline, the mercurial iodides, bichloride of mercury, phosphorus, strychnine and its salts.

After some discussion on the wording of the resolution which Dr. Böttger proposed, and which turned out to be an inaccurate translation of his original paper, it was mentioned by one speaker that the subject of the sale of morphia was under consideration in another section, and the decision on the two papers it was thought might be taken together. The subject was, therefore, adjourned.

It would have been inconvenient if one section of the Congress had expressed as the opinion of the Congress a view at variance with that which another section might express equally as the opinion of the Congress.

THE SALE OF MORPHIA

was introduced by M. Madsen, of Copenhagen, who commented at considerable length on the dangers of the immoderate use of opium. He regarded these abuses as due largely to the facility with which the public can obtain the alkaloid. The consequences engendered by this poison are so well defined as to constitute a special disease, known as morphism. The subject of this malady will commit the most abominable deeds to satisfy his insatiable craving. M. Madsen asserted that many Danes obtain the narcotic by sending special orders to English and German firms. The dangerous tendency to take it has been encouraged by descriptions in the secular journals of its first happy effects. He asked the Congress to resolve:—(1) That opium, and morphia, and its salts should be sold retail by pharmacists only; (2) that the supply from

a medical prescription for such should not be permitted to be repeated, and that when the customer demands his prescription it shall be first cancelled by a special stamp; and (3) that the prescription should bear not only the date and the signature of the physician, but also a special mark indicating that the writing is really his; and (4) that these measures should be universal.

The proposals made by M. Böttger and M. Madsen were discussed together. The discussion turned mainly on the question of the repetition of prescriptions, and, after a great deal of talk, a formula proposed by M. Von Waldheim was adopted, with a few dissentients. It was that the pharmacist has the right to repeat any prescription, except when the physician shall have specially ordered otherwise.

REPORT ON PHARMACEUTICAL EDUCATION.

By M. L. de Nobele.

THE object which the author of this interesting report has more especially in view is to uphold the dignity of the pharmaceutical profession and to advocate the granting of a State diploma of Doctor of Pharmacy, which is already done in some countries, placing the pharmacists on a par with Doctors of Medicine, Science, Divinity, Law, and Letters. It extends to forty-eight closely-printed pages and gives a brief outline of the pharmaceutical curriculum in the principal centres of civilisation, classed alphabetically.

At the outset attention is called to the fact that as science progresses pharmacy undergoes considerable transformation. In the first half of this century it dealt almost exclusively with herbs, whereas at present, thanks to the discoveries made by chemistry, the number of plants used directly as medicaments is diminishing every day in favour of the active principles extracted from them. This does not imply that pharmacy will fall into the domain of chemistry; on the contrary, the most varied knowledge is essential for the education of a pharmacist. The report deals with the methods by which different nations ensure for their students the acquisition of these various requirements.

Commencing with Germany, M. de Nobele points out that the pharmaceutical diploma is given by the State, represented by professional juries in which the Universities and the pharmaceutical body are equally prominent.

In order to present himself for this State examination the candidate has only to show that he has passed a certain time in some Government pharmacy where he has become acquainted with the legal tariff and general rules, for in Germany the number of pharmacies is limited, and the pharmaceutical chemist occupies a position similar to that of the notary public in other countries. It is well understood there that pharmacy is not only a branch of trade, and that all commercial competition in medicines is fatal to the interests of the public. There is only one examination, divided into five sections: Preliminary test, practical pharmacy, analytical chemistry, theoretical pharmacy, and final test. The number of promotions is limited to four for each session. There is also an examination for the grade of Assistant (*Gehülfe*), and the preparation of medicines is allowed to be carried on only by pharmacists or assistants (*Gehülfe*); the pupils and helps (assistants) are only permitted to work in the laboratories under the eyes of those holding the diplomas alluded to.

In Belgium pharmaceutical lectures form part of the University course. Formerly the law enacted that students in pharmacy should pass a preliminary examination (*épreuve préparatoire*), but the new decree of 1876 threw open the gates of the Universities in Belgium to all young men, whether qualified or not. The courses of study or lectures are given in the Faculty of Medicine. At the University of Brussels this section of the medical faculty is termed the "School of Pharmacy." The course extends generally over four years, but the law does not bind the students to any given period, it only imposes on those who wish to become pharmacists the obligation of passing two examinations before the professors of the Faculty of Medicine or before a central jury composed of official (University) professors and free professors (*professeurs libres*), which sits at Brussels for the purpose of examining candidates without taking into consideration the locality in which they may have studied.

No person can practise pharmacy unless he possesses the diploma of pharmacist, and shows that he has undergone two years' apprenticeship after passing his first examination. There is an exception to these rules in favour of country physicians, who are permitted to deliver medicaments to their patients. It appears also that since 1853 there exists a University degree of Doctor of Pharmaceutical Sciences, which has been occasionally conferred on gentlemen qualifying as professors, but which confers no State prerogative. It is granted to Doctors of Medicine and Pharmacists who have had at least two years' practice in the production and defence of a thesis, followed by an oral examination.

In Brazil the diploma of pharmacist is only granted by Government establishments. In the Universities the teaching of theoretical pharmacy is confined exclusively to the doctors of medicine; the pharmacist only holds the grade of *préparateur* (assistant) and is charged with the practical demonstrations. Candidates for the examination were formerly required to give proofs of a knowledge of French and Portuguese, arithmetic and geometry, but in 1880, Don Pedro II., who is himself a man of considerable learning, expressed the wish that more should be acquired, and now Latin, philosophy, geography, universal history, algebra, and the elements of physics, chemistry, and natural history are demanded. There is one examination divided into three tests, and previous apprenticeship is not obligatory.

The system of pharmaceutical study in Denmark is similar to that of Germany. There is one Board of Examiners for the whole country, which meets at Copenhagen. A pharmacist has a seat at it by law, and he is entitled to examine both on theoretical and practical subjects.

Spain and Holland appear to the author of this report to be the countries in which the system of pharmaceutical study and the dignity of the profession are best and greatest. In Spain the pharmacist enjoys an autonomy which places him on a par with graduates of any other kind. All academical degrees are held in the same esteem, whether they be of medicine, science, law, or pharmacy, &c. Whoever wishes to graduate in any faculty must take his Bachelor's degree, obtained after an average course of study, comprising Latin, universal and national history, literature, mathematics, elementary physics, and chemistry, the elements of physiology, hygiene, and agriculture, followed by a complete course of philosophy. The pharmaceutical studies are complete or incomplete at the option of the student. Those who only desire to practise content themselves with passing Licentiates; those who wish to rise higher, to become professors, or to acquire some Government position, can take the degree of Doctor of Pharmacy. The student who wishes to become licentiate is examined by a jury of three members, and must be not less than twenty years of age. For the doctor's degree there is a jury of five members. Faculties of Pharmacy exist in the Universities of Madrid, Barcelona, Grenada, and Santiago. The doctor's degree can only be obtained at Madrid. The course for obtaining the licentiate extends over five years (the academical year being of eight months—October 1 to May 31). The studies comprise general chemistry, experimental physics, mineralogy, botany, and elements of geographical botany, and zoology. These lectures are given in the Faculty of Science, and the student must go through this course before he can enter the Faculty of Pharmacy. In the latter the course comprises *materia medica*, pharmaceutical chemistry (organic and inorganic), and a practical course. Students for the licentiate follow only one course at a time, those preparing for the doctor's degree are bound to follow two, and, after passing licentiates, to undergo a course of analytical chemistry as applied to medical science, and comprising toxicology, extending over one year, as well as a course of medical history given in the Faculty of Medicine.

In Holland the pharmaceutical education allows aspirants to follow the bent of their inclinations either in a mercantile direction or in a purely scientific and educational form. In the first case much stress is laid on the practical elements of the examination. Two years of apprenticeship are required, at least, for the diploma of pharmacist, but no fixed period of study is exacted; the candidate can present himself for examination whenever he feels himself sufficiently prepared. There are two categories of pharmacists—those who have taken the University degree of Doctor of Pharmacy, and those who have only passed the preliminary theoretical

examination, but both are required to pass the final test, or State examination, which alone gives them the title of "pharmacist" and the right to practise as such.

Italy has the honour of being the first country in the world where pharmaceutical study was methodically organised. As early as the middle of the thirteenth century, Frederick II., King of Naples, published an edict forbidding the practice of apothecary to all except those who were duly qualified. The recent law of 1876 tends to accomplish uniformity of legislation as regards pharmacy throughout kingdom. The students of pharmacy pass special examinations on each branch separately, and, having thus completed their studies, they undergo a final examination on the whole.

In France, where pharmaceutical and medical studies have long attained a high degree of perfection, there exist three categories of pharmacists; the *Pharmacien de 1^{re} Classe*; the *Pharmacien de 2^e Classe*, who can only practise in his own province; and the *Pharmacien supérieur*, corresponding to the Doctor of Pharmacy of other countries, which is a degree held by a few men devoted to lecturing, &c. The studies extend over six years, and comprise three years of apprenticeship.

There are three great Schools of Pharmacy, Paris, Montpellier, and Nancy, and mixed Faculties of Medicine and Pharmacy in twenty other towns. The three years of apprenticeship end in an examination before a jury of three members; the student then follows a course of lectures for three more years, and has to pass, finally, three examinations. He thus obtains the diploma of *Pharmacien de 2^e Classe*. Besides this the *Pharmacien de 1^{re} Classe* must be bachelor of arts or bachelor of science.

In speaking of pharmaceutical education in Great Britain and the United States the author contrasts the present improved state of things in both countries with what existed only a few years ago, and compliments the Pharmaceutical Society of Great Britain. M. de Nobele gives details concerning Mexico, Turkey, Portugal, Japan, Russia, and the Republics of Central America, and in conclusion advocates as universal conditions:—

1. A diploma which alone entitles anyone to practise as a pharmacist.
2. That the pharmaceutical students should undergo the same preparatory studies as medical men and scientific men.
3. A programme of the minimum amount of qualification requisite for a pharmacist worthy of the name.
4. That in every country the titles of "Master," "Chemist," &c., should be replaced by that of "Doctor of Pharmacy."
5. In the absence of the principals to allow dispensing only to holders of the diploma of Candidate or Assistant.
6. The number of pharmacies to be limited according to population.
7. To create everywhere a diploma of Assistant.

This paper was brought before the general assembly, and excited a very general and animated discussion. This chiefly turned on the proposal that the title of Doctor of Pharmacy should in all countries replace whatever is now adopted. The best speech was made by M. Depaire, professor in the Brussels University. M. Depaire did not agree with those who wished to do everything with such completeness. He would wish to see doctors of pharmacy, but he would like to have pharmacists also. The former should be pharmacists who devoted themselves to the cultivation of the scientific side of their art, and who had passed through special courses of study. But, said M. Depaire, it is not the title which honours the profession: it is the manner in which the members of that profession fulfil their duties.

M. Cannizarro supported M. Depaire's views. In Italy he said they had been compelled to lower their standard of pharmaceutical competence, because it had been found that they could not get a sufficient supply of pharmacists for the smaller places in the provinces, and the Minister had told them that he preferred to have a lower standard of education for pharmacists rather than leave the population without pharmacies.

M. von Waldheim took a similar view, but M. Genevoix, the director of the Pharmacie Centrale of France, urged the principle of one grade of pharmacists. He also strongly advocated a return to the more serious apprenticeship which

formerly existed. There ought to be no apprenticeship of less than four years' duration, not counting till after a preliminary examination.

When the meeting came to vote, M. de Nobele's propositions were all adopted. M. Depaire again spoke against the adoption of the title of doctor of pharmacy, and said he would prefer a translation of the English title "pharmaceutical chemist"; but the temptation of a new dignity was too great, and by a large majority the Congress resolved that it was desirable to substitute the proposed title in all countries for that of pharmacien or its equivalent.

THE LIMITATION OF PHARMACIES.

THE Lombardy Pharmaceutical Association of Milan sent a small pamphlet, printed in Italian, French, and English, referring to the Universal Pharmacopœia and to the limitation of pharmacies.

In regard to the first subject the Association, after restating generally the arguments in favour of such an undertaking, expressed the hope that every nation, with its complete and reciprocal study of therapeutics, would add its own scientific element and its own intelligence.

To ensure success they think it necessary that the International Pharmacopœia should prescribe the most suitable parts of plants, the conditions for cultivation and development, the locality and season in which the plant destined for preparations is to be found, &c. Unalterable rules are then necessary concerning "the flora," and these should be the result of a comparative study of the vegetation of the different countries in order to determine from which part a plant is to be obtained, and so forth. Similar exact details were desired concerning all drugs and chemicals.

With regard to the second question, viz., the limitation of the number of pharmacies, the Lombardy Pharmaceutical Association, while declaring itself an earnest partisan of industrial and commercial liberty, does not consider that that liberty should be applied always in everything without limit and without exception.

The pharmaceutical art has a particular character that distinguishes it from every other art and profession. Its products are not at the disposition of him who demands them; the selling of them is regulated by law. No one goes to buy them without precise directions which determine the quality, quantity, and measure. And the pharmacist is so strictly held to observe the imperative forms prescribed to him, that the least deviation carries with it a great responsibility, and may endanger the health and even the life of a person. So, whilst every other tradesman, who opens his shop and sells his products without restraint, and with no other rule than his own interest, can give the greatest impulse to the business, the pharmacist who does the same would place himself in opposition to the law or to his own duties.

What does free competition in regard to pharmacy mean? This: That there commences between the pharmacists a bitter strife as to who will sell the most medicines. Such a strife for the sale at any risk of medicinal substances more or less dangerous cannot take place without evil effects.

Admit free practice, and then in the strife which pharmacy has to sustain we have the ardent "struggle for life of Darwin," and each pharmacist, obliged to meet expenses of every kind, and wishing to reimburse himself for expenses undergone and capital employed, will abandon himself to those equivocal practices which are the shame of pharmacy, and that all the laws of the world cannot prevent. And who can blame him if he has recourse to every means of obtaining money, when, goaded by competition, he uses all his powers to obtain by a thousand artifices and tricks those benefits which the regular exercise of pharmacy is not able to give him?

The Association therefore urge that, just as the State for the public good has derogated from the principle of free competition in the practice of a notary in banknote emission and such things where it is only a question of pecuniary interest, much more should this derogation be extended to the practice of pharmacy, where the public health is concerned.

M. BRATIMOS, on the part of the Society of Pharmaciens of Athens, submitted a report on "The Principles of the Laws

in Force on the Practice of Pharmacy," followed by an argument for the necessity of an international law regulating pharmacy.

The object of pharmacy laws, say these modern descendants of Solon, is to ensure the health and care of the population. And this purpose demands that the pharmacist should prepare the prescriptions of the physicians exactly and scientifically. And how can that result be most assuredly attained? It will not be ensured by the diploma, nor by inspection, nor by penal laws. The essential condition, the best guarantee, is that which depends on the prosperity of the pharmacist. Laws should, therefore, be directed towards this end. "The pharmacist is a man like unto others, and has, like others, virtues and defects." Except in rare cases, poverty may tempt him to falsifications, to dishonest dispensing, perhaps to furnish the means of vice, the drugs for an abortion, or the chloroform for the purposes recently revealed by the "*Pal-Mal Gazette*." So argue the Pharmaceutical Society of Athens. The health of the people depends on the prosperity of the pharmacist. Ergo it is the duty of the State to promote this prosperity, and the State can best do its duty in this respect by limiting the number of pharmacists. Free trade is very desirable in regard to provisions or vestments, but it is ruinous to the community if applied to medicines. This thesis was argued at considerable length, and, in conclusion, it was maintained that the subject was one of such importance that it was desirable to form an International Commission, charged to prepare a form of law applicable to all countries, which should be discussed at the next Congress, and, after approval, submitted to all Governments.

There was an animated discussion over this proposal, though it was nearly all on one side. M. Seutin told how sad was the condition of Belgian pharmacists owing to the competition which is permitted to prevail there. A member from Holland showed how well off the pharmacists are in his country. Mr. Goddefroi described the position of affairs in Austria, M. Zanni told of Turkey and Bulgaria, M. Krohn described pharmacy in Norway, and M. Bernacco gave details of the profession in Italy. M. Petit, who presided over the section, summed up the discussion, and, extracting the sense of the various speeches, put the following propositions:—"Does the public interest demand the limitation of pharmacies?" There were about twenty members in the room, and about three-fourths of them voted for the proposal. M. Petit did not ask for a vote in the negative, but declared the proposal carried unanimously. Then came the question whether this limitation should be brought about by Government action, or by increasing the severity of the studies. The section was about equally divided on this point, so that was passed over. Lastly, the proposal to form an International Commission was carried, the section recommending the Congress to appoint such a Commission.

VETERINARY PHARMACY.

M. BERQUIER, of Provins, first-class pharmacien, President of the Pharmaceutical Society of Seine-et-Marne, submitted a report in regard to veterinary pharmacy. This gentleman had been concerned in drawing up a Bill for the French Parliament on the subject, and he had suggested to the Committee of the Brussels Congress that it was a matter worthy of international consideration. The great and increasing value of animals renders it important that they should be treated with good drugs and with skilfully-made preparations. The sweepings of warehouses are no longer suitable for veterinary medicines, and M. Berquier advocates that such restrictions as are applied to the supply of medicines for human consumption should be extended to the sale of veterinary medicines.

The following is a *résumé* of the result of inquiries into the practice in regard to veterinary medicines of the countries indicated.

In Germany the general law is that only pharmaciens may supply medicines, both human and veterinary: but diplomaed pharmaciens are allowed to supply the medicines they themselves prescribe, only they are prohibited from keeping an open shop. In different parts of the Empire there are some special modifications of this practice. In Baden the veterinarian can only keep a pharmacy if authorised by the

Minister of the Interior; in Wurtemberg he may only keep simple doses of poisons; and there are besides special local differences in regard to inspection.

"In England," said the reporter, "the regulation is still in an embryonic state, if I may so express myself." M. Berquier's description of the condition of pharmacy in England was based on Professor Atfield's pamphlet on "The Future Supply of Drugs to the Public." Under such conditions of pharmacy doctors and veterinarians have every latitude to combine pharmacy with their practices, and of this they do not fail to take advantage.

In Austria the practice corresponds closely with that of Germany.

In Belgium pharmacies are not limited in number, but pharmaciens only may supply medicaments; but exceptions are made in the cases of country doctors and of veterinarians generally.

In Denmark, where pharmacies are strictly limited, and veterinarians must also be diplomaed, the latter may not keep open shop, but they supply to their clients the medicines which they prescribe. They may obtain their medicines where they please, except in the case of arsenic, which they must buy from a pharmacist.

In Spain pharmacists alone may supply medicines, and there is no exception in favour of doctors or veterinarians.

In the United States veterinary medicine and pharmacy are both free, though a diploma for a veterinarian is required in the city of Philadelphia.

In France the law relating to pharmacy does not mention veterinary practice, and the Courts, guided by an old text of the law which refers to medicaments entering into the human body, have decided that these laws do not apply to medicines for animal use. A special law of 1846, however, limits the sale of certain poisons to pharmaciens.

In Holland veterinarians are exempted from the general pharmacy laws.

In Italy pharmacy is reserved to diplomaed pharmaciens, and there is no exception in favour of veterinarians.

In neither Russia nor Sweden is there any exception in favour of veterinarians; and in Roumania and Servia only in cases where the latter resides where there is no pharmacien.

In Switzerland there are cantonal and federal laws. Generally, pharmacy is restricted to the pharmacien, but in many of the cantons the veterinarian opens his pharmacy if he pleases.

At great length M. Berquier afterwards elaborates his arguments, which are mainly that the relation between the pharmacien and the veterinarian is analogous to that existing between the pharmacien and the doctor. That the latter is not trained to the preparation of medicines; that his occupation out of doors unfits him for laboratory work; and chiefly that, in the public interest, the prescriber should not be a dealer in the medicaments he prescribes.

The reporter concluded his essay by asking the Congress to declare that, on account of the increasing importance of veterinary medicine, considering that infectious diseases are transmissible from animals to men, it is of great public interest that the treatment of animals should be carefully regulated; and considering that the practice of pharmacy is generally regulated so as to ensure the good quality of drugs, and that this is as necessary for animals as for men, that veterinary pharmacy demands all the guarantees generally recognised as necessary for human pharmacy. And he further proposed that in all countries laws should be made to meet this necessity.

M. Berquier gave a *résumé* of his paper, and his conclusions were generally supported by MM. Patruillard and Petit.

POISONOUS ALKALOIDS AND GLUCOSIDES.

By M. Madsen, Copenhagen.

THE author referred to accidents which had resulted from the use of French instead of German aconitine, and such like; recalled the investigations of various chemists in regard to aconitine, naming in this respect Grove, Williams, and Wright in England, Laborde and Duquesne in France, Langgard, Dragendorff, Huseman, Harnack, Mennicke, and Maudelin. There is no qualitative reaction special to aconitine. In very

skilful hands the products of decomposition, aconine and benzoic acid, may give satisfactory evidence of purity, but this method cannot become generally adopted. Physiological experiments only can settle the toxic effect of a particular sample of aconitine. M. Madsen, in conjunction with Dr. Buntzen, has lately ascertained by physiological experiments that there is still great difference between various samples of aconitine of commerce. There is similarly considerable difference in the physiological effects of various samples of digitaline and emetine. M. Madsen asked the Congress to resolve—

That every manufacturer of the above-named alkaloids and glucosides should be required himself to ascertain the exact toxicity of his products at each manufacture, and that he should only supply these in bottles bearing labels which should state the lethal dose for animals, and the maximum dose for human beings.

PHARMACEUTICAL INSURANCE SOCIETIES.

By M. Bertault, *Pharmacien, Laroche-sur-Yon.*

THE author advocated the creation in each country of a mutual central insurance society among the pharmacists of the same country. We reported in May last the formation of such a society in France, the working of which we briefly outlined. In this paper M. Bertault presented a scheme fully drawn up for the establishment and conduct of such an institution. The plan thus elaborated required that each participant should engage himself for ten years, paying an entrance fee and an annual contribution. In case of any dispensing accident the Council to undertake the arrangements and to conduct the defence if such is necessary.

APPRENTICESHIP AND ASSISTANTSHIP.

THE legal position of apprentices and assistants, entirely from a Continental point of view, formed the subject of two or three papers presented to one of the sections. Dr. Hans Heger, on the part of the Vienna Apotheker Verein, submitted a report which proposed that apprenticeship might be undertaken in any country; also, that established pharmacists might be at liberty to employ assistants of any nationality, with or without diplomas, provided that the dispensing of the latter should be under the supervision of a qualified pharmacist.

M. Petit also proposed a resolution, the object of which was to make apprenticeship in any one country available for the examinations of another country. All of these proposals were adopted with a few dissentient votes.

A long discussion followed the reading of M. Patrouillard's paper, and a resolution was arrived at to the effect that the Congress considered it desirable that pharmacists should resume the tradition of more generally preparing medicaments in their own laboratories.

M. Opwyrd, of Nimègue, proposed and carried a resolution in one of the sections that, inasmuch as it is impossible for the pharmacist to be always in his shop, the assistant representing him should be qualified, and should be personally responsible.

THE PREPARATION OF MEDICINAL CHEMICALS BY PHARMACISTS.

M. CH. PATROUILLARD read a brief and appropriate paper in which he advocated a much more general return on the part of pharmacists to the system of old times when the pharmacist (in France) prepared most chemicals used in medicine in his own laboratory.

Starting with the proposition that the pharmacien is directly responsible for all products which he sends out, he said the rigorous application of that principle would be the suppression of the "specialty," and the obligation on the part of the pharmacist either to choose all products with the utmost care or to prepare them himself. It would be superfluous to insist on the necessity imposed on all pharmacists to prepare themselves all galenical medicines. But in regard to chemicals, opinion is not by any means united in the

same sense. Professors, pharmacologists, and the majority of pharmacists themselves have concluded that the supply of chemicals is now the business of manufacturers, who can provide them purer and cheaper than they can be made in the pharmaceutical laboratory. His own experience, however, as regards price, was opposed to this theory, and he believed his view was supported by Professor Attfield, of London, by Messrs. Klie and Mercein, of America, whose tables he quoted from the *American Journal of Pharmacy* (1876, p. 398, and 1878, p. 791), and by Mr. Perrens, of France. If some preparations, such as the hydrated oxide of iron, oxide of zinc, phosphate of lime, acetate of potash, &c., could be bought cheaper than they could be made, it would be found that this was because they were residues or by-products, and often impure. But, besides economy, it must be remembered that the pharmacist is bound to assure himself of the genuineness of all his chemicals, and in some cases it is more troublesome and expensive to analyse a preparation than to make it. Dr. Wright, of London, for example, considers that only by an ultimate analysis can aconitine be certainly distinguished from pseudaconitine or japaconitine. The author does not regard it as an indication of progress that Pharmacopœias show a tendency by the omission of processes for chemicals to discourage their production by the pharmacist. He recalls the days when such pharmacians as Boullay, Pelletier, Planche, Boutron, Bourlet, &c., made their laboratories famous, and regrets that under the more modern system the apprentice should find his whole energies devoted to the service of the shop and the sale of drugs.

The tables submitted by M. Patrouillard may be quoted. It should be noted that in no case does the laboratory cost-price include any allowance for the work of the pharmacist or of his pupil.

MR. G. H. C. KLIE'S TABLE.

Am. Journ. Pharm., 1876.

	Commercial Price	Laboratory Cost
Acid phos. dil. lb.	0.30	0.20
Brom. ammon. "	1.00	0.75
Antim. oxid. "	1.00	1.15 ³
Calc. hypophos. "	3.00	2.63
Collodion "	1.10	0.76 ¹
Ferri citras "	1.45	1.30 ¹
Ferri pot. tart. "	1.00	1.42 ³
Ferri pyrophos. "	1.35	1.09 ¹
Ferri et quin. cit. "	8.50	5.29
Hydr. binoid. oz.	0.50	0.20
Hydr. protiodid. "	0.45	0.32
Morphia "	4.75	4.35 ¹
Pot. acetat. lb.	0.60	0.52
Pot. bromid. "	0.70	0.68 ¹
Pot. iodid. "	2.75	2.84
Pot. tartras. "	0.60	0.58
Pyroxilin oz.	0.50	0.16
Quiniae tannas "	2.30	1.27
Quiniae valerian "	6.40	4.65
Resin jalape "	0.75	0.41
Sodæ hyphosphis "	3.00	2.70

Mr. Mercein's list, with which actual prices are not given, adds to the above a few more preparations which he considers it profitable to make. Among these are several other compounds of iron and of mercury, iodides of lead, sulphur, and arsenic, and burnt alum.

M. Patrouillard's own table, which is presumably recent, is as follows:—

	Commercial Price	Laboratory Cost
Liq. plumbi acet. kgr.	0.80	0.45
Ferri iodid. "	30.00	14.04
Hydr. biniodid. "	40.00	10.95
Sulphuris iodid. "	30.00	16.00
Hydr. sulph. nig. "	10.00	4.60
Hydr. bisulph. "	5.50	3.60
Morphiæ hydrobrom. gram.	0.75	0.71
Quiniae salicylas "	0.65	0.50
Pyroxilin kgr.	40.00	15.00
Collodion "	8.00	5.00
Potass. acetat. "	3.75	5.00

POTABLE WATERS.

M. VAN DE VYVERE presented a report in answer to the questions, "What are the characteristics of good drinking water?" and "In the present condition of science how may these characteristics best be judged?" M. Van de Vyvere's treatment of the subject was both able and thorough. The pamphlet containing his report occupied over sixty large octavo pages. It will be evident that we can only indicate the leading points of his work.

He started with the conclusions arrived at in reference to potable water at the General Congress of Hygiene in 1852. The characteristics of good water were then declared to be the following:—

Limpid, fresh, odourless, very slight and not unpleasant taste, neither flat, sweet, nor salt; aerated, and containing some carbonic acid in solution; containing neither animal nor vegetable matter, and, particularly, no putrefying matter; not liable to acquire an unpleasant odour if kept in a closed or open vessel: will dissolve soap without forming flakes and will properly cook vegetables; mineral principles should not exceed $\frac{1}{10000}$ to $\frac{2}{10000}$, a water containing above $\frac{5}{10000}$ cannot be considered good; the most injurious metallic salts named were sulphate of lime, nitrates of lime and magnesia, chlorides of those bases, and ammoniacal salts. One ten-thousandth of carbonate of lime was not to be regarded as injurious. The water should not be in such a position as should render it liable to contamination of various kinds.

M. Van de Vyvere traced the modifications of opinions which subsequent researches had brought about, and he gave a brief recital of the different views which had been entertained since respecting the quantity and character of the inorganic, as well as of the organic, matter contained in water. With regard to the latter, microscopic examinations, biological analysis, and cultures have enabled us to widely extend our knowledge. It is recognised that there can be no water quite free from organic life, and that, indeed, the presence of certain diatomaceæ is an indication of purity. But, above all, we have learned of late years how certain epidemic diseases, cholera and typhoid fever especially, are propagated by certain organic impurities frequently contained in water. But the author maintained, and quoted numerous authorities in support of the opinion, that it was not sufficient to depend exclusively on a bacteriological examination of water. A proper examination of water to be used as food ought to comprise chemical, microscopical, and bacteriological analysis, the latter by means of the cultivation of the micro-organisms contained, and distinguishing, as far as possible, injurious from harmless bacilli.

After insisting on the desirability of a fixed and uniform method of analysis being adopted by all chemists, the author expounded, with careful attention to details, all the various processes which he regards as necessary for a complete analysis. Extra processes were given for cases in which extreme accuracy is necessary. The conclusions formulated in the paper were that a potable water ought to satisfy the following conditions:—It should be limpid, transparent, colourless, odourless, and free from suspended matter; fresh, of an agreeable taste, temperature fairly uniform, and not exceeding 15° C.; aerated, and holding in solution a certain quantity of carbonic acid; the air contained to have 30 to 33 per cent. of oxygen; containing no injurious animal or vegetable matter, and nothing in process of decomposition; organic matter not to exceed 20 milligrammes per litre, and not to be nitrogenous; nitrogenous organic matter burned by an alkaline solution of permanganate of potash not to furnish more than one-tenth of a milligramme of albumenoid nitrogen per litre; not to contain more than $\frac{1}{2}$ milligramme of ammonia per litre nor more than $\frac{1}{2}$ gramme of mineral salts, 60 milligrammes of sulphuric anhydride, 8 milligrammes of chlorine, 2 milligrammes of nitric anhydride, 200 milligrammes of earthy alkaline oxides, 30 milligrammes of silica, and 3 milligrammes of iron per litre of water; should contain neither nitrates, phosphates, hydrogen sulphide, sulphides, nor any metallic salts precipitable by hydrosulphuric acid or hydrosulphate of ammonia, except traces of iron, aluminium, or manganese; not to acquire a disagreeable odour after keeping in either a closed or open vessel; should dissolve soap without forming flakes, and should well cook vegetables; its hydro-timetric titration not to exceed 60°; contain neither *sapro-*

phytes, *leptotrix*, *leptomites*, *hyphotrix*, or other white algæ, various infusoria, bacteria; addition of white sugar should not develop fungi; cultivated with gelatine should not produce innumerable bacteria liquefying gelatine in less than eight days.

M. Van de Vyvere also submitted a report on the "plastering" of wines, and his resolution was adopted that "plastering" ought to be suppressed, though for a time an addition of pure sulphate of potash not exceeding 2 grammes to the litre should be tolerated.

M. Zanni proposed the creation of an International Commission, to be entrusted with the execution of all measures relative to the falsification of food and drink. The section, prudent as usual when definite action was asked for, resolved that M. Zanni should be requested to have his views printed, so that they might be discussed at the next Congress.

A proposition made by M. Van Hamel Roos was, however, recklessly adopted. It was that the Congress should undertake the publication of an International journal relative to falsifications. Some of the speakers, too, suggested that such a journal might deal with the other topics of interest to the Congress. "*Voilà une véritable proposition!*" exclaimed M. Van Bastelaer when this proposition came before the general Congress at its final session. At his suggestion the proposal was modified in such a way that it was left for the consideration of the Permanent Committee.

M. Maignen, of London, had the opportunity of exhibiting to the Congress a series of experiments demonstrating the efficiency of his very ingenious filters. M. Maignen is an inventor who adds enterprise to ingenuity, and these two qualities combined won for him the hearty sympathy of his audience. His experiments were, besides, in the highest degree interesting and practical. The next Congress, however, may anticipate the offer of a large number of essays on water-filtration from the rivals who on this occasion have been smartly outstripped by our esteemed French fellow-citizen.

Among the resolutions adopted in reference to waters, foods, and poisonous substances, was one recommending steel beads in place of shot for cleaning bottles; another advocating the prohibition of poisonous colours in the manufacture of dresses, artificial flowers, toys, &c.; another, that whenever tin should be employed for vessels to contain articles of food, only the pure metal should be permitted; another, proposed by Dr. Cannizarro, advocating that Governments should undertake the analysis of drinking-water, as had been done in the United States.

ADULTERATION OF FOOD—AN INTERNATIONAL AGREEMENT.

M. BELVAL reported on this subject. He cited the laws of a great number of countries to show that everywhere the Legislatures had seen fit to combat the trade in adulterated food. The advantages of an international agreement in such laws, and of mutual communications in reference to frauds of this kind, were set forth and quoted from the reports of various hygienic congresses. The bases of legislation which actually exist, or should exist, are, among others:—

That the vendor should be responsible. He ought to be presumed to know his business. A contractor ought to see that the materials he employs in his constructions are sound, and it would be no excuse for a bankrupt who had kept no books to plead that he did not understand bookkeeping.

Exposure for sale ought to be punished as well as actual sale.

Mixtures ought to be clearly indicated.

Shops where provisions are sold ought to be subject to official inspection.

Official laboratories ought to be established for towns or districts, and central laboratories ought to decide on official standards of impurity, on processes of analysis, and on the method of stating results.

Punishment, as a rule, ought to be severer than it is. For a repeated conviction, announcement of the judgment on the door of the offender is advocated.

An international agreement, defining adulteration, fixing standards, and working in harmony, and advising mutually in regard to alleged frauds of manufacture, is the conclusion suggested by the reporter for adoption by the Congress.

M. Belval explained that his chief object in bringing forward this question was that there were still some countries where the examination of food for adulterants had not been taken up by the authorities. International commerce in alimentary products had become of much greater importance in proportion as the means of transport had become more abundant. The difficulty was to ascertain when the adulteration is actually performed. Often this is a matter of doubt. What is wanted is, that the various Governments should agree on certain regulations which should be followed in all countries. If such an agreement could be adopted it would be possible to prepare a sort of code of standards which would serve as the basis for hygienic law.

M. Van de Vyvere thought it necessary to fix a limit to the quantity of foreign substances which could be permitted in certain foods which always contained such. He also thought it desirable to establish uniform methods of research.

M. Bergé said such methods, which were continually being changed, could not be fixed, unless, indeed, a permanent Congress were appointed. As to the limits of foreign matter to be allowed this might be possible in the case of simple foods, such as chicory, pepper, &c. But there would be greater difficulty in regard to the products of manufacture, such as beer, for example. Additions are made to this to colour it, to brighten it, to preserve it, &c.; the real point is to prohibit the use of substances injurious to health. He would define adulteration as "the realisation of a fraudulent profit."

M. Petit said it would be dangerous to fix maxima and minima. He instanced wine and milk, which might be of poor quality, but yet might not be falsified.

After a considerable further discussion M. Belval's conclusions were all adopted, almost or altogether with unanimity.

On the second day Professor Redwood presented to the Congress the first published copy of the new British Pharmacopœia. It did not transpire where the volume would find a resting-place.

At the second general assembly the President read a telegram from the Hungarian Pharmaceutical Society meeting at Buda-Pesth, sending their cordial salutations to the Congress.

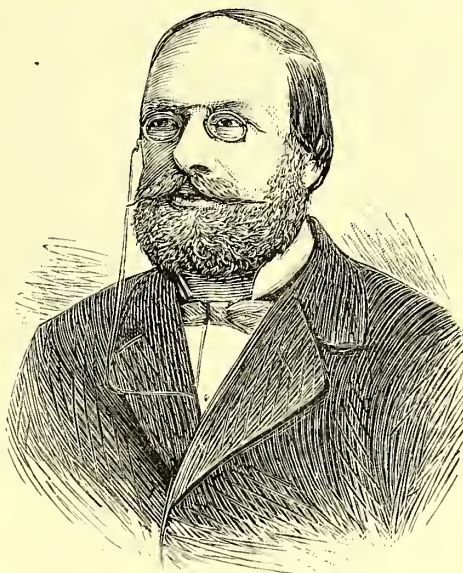
THE INTERNATIONAL PHARMACOPEIA.

THIS, the special work of the Congress, was brought forward for consideration in the last general assembly on the afternoon of Saturday, September 5. The President of the International Pharmacopœia Commission, M. von Waldheim, had brought to Brussels some copies of the work upon which he has been engaged, of which the introduction and commentary were printed in the German language. Subsequently, copies were distributed with those sections in French; in both the projected International Pharmacopœia itself was given in Latin.

M. von Waldheim first gives a preface, tracing the history of the project of the International Pharmacopœia, from the first discussion on it at the Paris Congress in 1867 down to the present time. At the London Congress in 1881 a Commission was appointed, which, afterwards added to, numbered 35 members, representative of all European nationalities and the United States. M. von Waldheim was elected President of the Commission, with MM. Petit and Martenson as vice-presidents, and Professor Goddeffroy acted as secretary. The first duty was to draw up a list of drugs and preparations for consideration, abbreviation, and augmentation by the members. For this purpose seventeen Pharmacopœias were used. The lists were distributed among the representatives and returned very much amended, so that when the scheme was finally trimmed down to a presentable form, many difficulties (the chief due to the numerous languages employed in Pharmacopœias) had been overcome; and the writer of the draft is quite justified in completing his preface with the modest apology for delay, and the hope that a generous spirit of compromise and a common bond between medicine and pharmacy may now settle the question which has been discussed for eighteen years.

So far the preface. In the next part interesting information of the moulding of the scheme is given. The original list sent to the delegates contained 232 articles; of these 188 were generally approved, and 44 were struck out. The

returned lists showed an aggregate of nearly 500 articles, among which were a great many very old and some very new remedies. Ultimately, after much voting, the majority of the Commission agreed on a scheme, giving a total of 293 substances and preparations. Of these 181 are printed in large type as of special importance, and 112 in smaller



M. VON WALDHEIM.

type. On the margins of the pages information is given as to the Pharmacopœias in which the articles are official, and the votes for and against each article are also indicated. This is an interesting and in some respects an amusing column.

To bring the nomenclature to uniformity was a difficult task. The old question of the new *versus* the Berzelian system cropped up, as well as that of use and wont; ultimately it was decided to adopt as the principal name that which was most common, except in cases where a preparation had a trivial name known over the whole world. The result is like this:—

Hydrargyrum bichloratum corrosivum.

Hydrargyri Chloridum corrosivum.

Chloratum hydrargyricum—Sublimatum corrosivum.

Solutio arsenicalis Fowleri.

Kalium arsenicosum solut. spirit. Fowleri.

Potassii Arsenis solutus Fowleri.

Arsenis potassicus solutus Fowleri.

Thus the names which are most commonly used get the place of honour, and are printed in larger type, as above.

A not less important and even more difficult part of the labour next faced the Committee. This was to agree upon the potency of simples and compounds. After prolonged consideration, the following principles were agreed upon. First, regarding a standard for crude drugs, the botanical and zoological names, habitat, and the part of the plant or animal used, sufficiently indicate the drug recognised in the scheme; while a specified time for collection and method of preservation ensures uniformity of quality as far as that is possible. Second, uniformity in strength of preparations of drugs is attained by adopting a constant and clearly-defined process; and third, chemicals and chemico-pharmaceutical preparations are equalised by describing their physical characteristics, such as odour, colour, volatility, specific gravity, melting or boiling point, solubility, reactions, &c., and fixing a limit of impurity.

Except with lozenges and pills, in which case a definite weight of ingredients in grammes is given, the proportions of the ingredients in all the formulæ are expressed in parts (by weight). The committee fully considered the question of the exhaustion of drugs in such preparations as extracts,

tinctures, &c., and though admitting that uniformity would be best ensured by percolation,* yet the fact that the process of digestion and maceration is the most common compelled the committee to adopt it. For some plasters and ointments the powdered drug is used in preference to extract, because some Pharmacopœias do not contain such extracts. This was the only way the committee saw out of this difficulty. Then for oils, such as ol. hyoscyami, prepared by digesting the drug in a bland oil—fresh or dried drugs may be used.

After some remarks on the determination of temperatures and specific gravities, the commentary concludes with references to some special preparations. The strength of the dilute acids (acetic, hydrochloric, nitric, and sulphuric) is that of the Austrian Pharmacopœia, based on the saturating power, and they are of equal acidity. Of aconitine and digitalin, three kinds of each are admitted, each having a special designation to avoid error. In the nomenclature of aqueous solutions of salts the name of the salt is placed first, (thus, atropinum sulphuricum solum), and when spirit is the solvent the word "spirituosa" is added; this overcomes the pharmacopœial confusion in such terms as "Solutions," "Liquores," and "Misturæ."

The popular names recommended are "Aqua phagedænica flava et nigra," "Liquor acidus Halleri," and "Solutio arsenicalis Fowleri."

We cannot do more this month than present a very few selections from the work. It should be premised that careful descriptions are given of the various drugs and chemicals named, so as to ensure a standard quality.

Acidum hydrochloricum dilutum.

Acidum hydrochloratum dilutum.

Acidum chlorhydricum dil.—Acid. muriatic. dilut.

	Partem
Acidi hydrochlorici	1
Aquæ destillatæ	1

Misce.

Sit pond. sp. 1.06, contineat in 100 partibus 12.4 partes gasis hydrochlorici.

Acid. hydrochloric. dil. ab Arsenico, ab Acido sulfurico et sulfuroso, a Ferro aliisque Metallis sit liberum.

Officinale in omnibus Pharmacop. Desid. a 33 Deleg. Non des. 2 Deleg. (2 Hisp.)

Aconitinum vel Aconitina.

Aconitia.

Pulvis amorphus albus, saporis amari dein acris, urentis reactionis alcalinæ. Ad 80° liquescit, quin vapores aqueos edat. In partibus 150 Aq. frigide difficile solvitur, facilius in 50 partibus Aquæ bullientis, in massam resinosa flavescenscentem conglutinans, facillime solvitur in Æthere, Spiritu et Chloroformio.

Per Acidum sulfuricum Aconitinum colorem ab initio flavum dein e rubrofuscum induit; in Acido nitrico solum Aconitinum decolor manet. Solutio aquosa Aconitini cum Tinctura Jodi præcipitatum obscure fuscum producit.

Anglic. Austr. Belg. Helv. Hisp. Hung. Ital. Neerl. Port. Russ. Desid. a 29 Deleg. Non des. a 6 Deleg. (2 Germ. 2 Hisp. 2 Suec.)

Æther nitrosus spirituosus.

Spiritus Ætheris nitrosi.

Spiritus Nitri dulcis.

	Partes
Spiritus 90 per cent.	48
Acidi nitrici	12

Misce et sepe per 12 horas, tum in retortam vitreamingere et destilla, donec partes 40 transferint, quæ cum Magnesio oxydato neutraliscentur et horis 24 circumactis ex aquæ balneo rectificentur.

Liquor limpidus coloris expers vel subflavescens, odoris suavis ætheri, saporis dulciusculi ustulantis, plane volatilis et ab Acido quantum fieri potest liber.

In omnibus Pharm. exceptis: Austr. Gallic. Hung. Desid. a 23 Deleg. Non des. a 9 Deleg. (1 Amer. 1 Dan. 2 Germ. 2 Iric. 2 Norv. 1 Russ.)

* The U.S.P. process for extracts receives the high commendation of the Committee.

China.

Cinchona. Quina

Cortices diversarum Cinchonæ specierum ab arboribus collecti in Andibus Americæ australis indigenis et in India orientali cultis. (Rubiaceæ-Cinchonæ.)

In omnibus Pharmacop. Desid. a 38 Deleg. Non desid. a 2 Del. (Germ.)

I. Chinæ (Cinchonæ vel Quinæ) calisayæ cortex.

Chinæ (Cinchonæ vel Quinæ) cortex flavus vel regius. Hisce nominibus officinalis est:

Cinchona calisaya Weddell.

Contineat in 100 partibus ad minimum 2 partes Chinini.*

In omnibus Pharmacop. excepta Germ.

II. Chinæ (Cinchonæ vel Quinæ) cortex fuscus vel griseus.

Chinæ (Cinchonæ vel Quinæ) pallidæ cortex.

Officinales sunt hujus Cinchonæ species sequentes:

Cinchona condamin. Humb. et Bonpl.

" officinal. Linn.

" micrantha R. et Pav.

" macrocalyx Pav.

" Uritusinga Pav.

" chahuaguerra Pav.

" nitida R. et Pav.

" crispa Tafall.

" peruv. How.

Et quidem sub nominibus "China Loxa (Loja)" et "China Huanuco" ubique notæ.

Contineat cortex harum Cinchonæ specierum ad minimum partem 1 Chinini.

In omnibus Pharmacop. exceptis: Americ. Germ. Norv. et Suec.

III. Chinæ (Cinchonæ vel Quinæ) cortex ruber.

Hisce nominibus officinalis est:

Cinchona succirubra Pav.

Contineat in 100 partibus ad minimum partes 2.5 Chinini.

Officinale in omnibus Pharmacop. exceptis: Græc. Helv. Hisp. Hung. Norv. Suec.

Emplastrum Belladonnæ.

Extracti Belladonnæ foliorum in s. q. Spiritus

70 per cent. soluti 1 partem

admisce

Emplastri Plumbi oxydati leni igne liquefacti .. 9 partibus et fiat lege artis Emplastrum.

Contineat in 10 partibus Emplastri partem 1 Extracti.

Si Extractum Belladonnæ foliorum non præsto sit, hoc Emplastrum etiam ex

Belladonnæ foliorum pulveratorum cum pauxillo

Olei Olivarum tritorum 1 parte

cum Emplastri Plumbi oxydati liquefacti .. 2 partibus lege artis parari licet.

Contineat in partibus 3 Emplastri partem 1 Belladonnæ foliorum pulveratorum.

Officinale Amer. Angl. Belg. Gall. Helv. Neerl. Port. Desid. a 27 Deleg. Non des. ab 8 Del. (2 Germ. 2 Hisp. 2 Ital. 2 Suec.)

Opium.

Succus lacteus e capsulis immaturis Papaveris somniferi (var. alba) incisione vulneratis exsudans, aëre induratus, nobis ex Turcia advectus.

Opii 100 partes, leni calore siccatae ne plus quam 8–10 partes Aquæ ad minimum 10 partes Morphini puri contineant.

Opium in Aqua solum, lege artis depuratum et evaporatione inspissatum, e 100 partibus Opii adhibiti ad minimum 50 partes Extracti consistentiæ mollis præbeat.

Opium ne sit mucidum neque Amylo, nec substantiis heterogeneis inquinatum.

Officinale in omnibus Pharm. Desid. ab omnibus Deleg.

M. Mehu claimed that the project very closely resembled the draft which he had had the honour to present to the London Congress, though a certain number of preparations had been suppressed.

DR. QUINLAN, Dublin, had read a paper in French on the first day in Section 1. This contained absolutely nothing new. It related how the English, Scotch, and Irish Pharmacopœias had been amalgamated, and gave examples of difference in strength of certain medicines in different countries. The author demanded that the International Pharmacopœia to be issued by the authority of the Congress should be complete.

In the section the paper was politely shelved, or "civilly interred," to use the slang of the Congress, by a remark from M. Capgrand that as the essay was not printed it was impossible to discuss it.

In the course of this discussion Dr. Quinlan again mounted the tribune and commenced to re-read his manuscript. He was, however, quickly checked by the President, who remarked that, as the paper had been read in the section, a *résumé* would be sufficient for the general assembly. Dr. Quinlan therefore read only his concluding paragraph.

Mr. Greenish, speaking in English, said that the St. Petersburg, London, Paris, and Vienna Congresses had all laid down the principle that only potent remedies should be included in an International Pharmacopœia. This project was a great improvement on that which was submitted at St. Petersburg, but he still thought there were far too many articles included.

This opinion was shared by some other speakers. M. Patrouillard criticised some of the details of the scheme. M. Mehu intimated that the general support of the Paris Pharmaceutical Society might be depended upon, but M. Petit was inclined to be more critical. M. Madsen desired to press forward the final revision of the work, so that it might be submitted to the various Governments within the next six months. M. Gille thought the Congress should not express its final approbation of the scheme which the Commission had formulated. It was desirable that it should be more closely studied and discussed in the journals of pharmacy, and that the next Congress should take the final resolutions in reference to it. A resolution in this sense was carried.

It was suggested that the delegates should do all they could to ensure the adoption of the formulæ agreed upon in any country where a Pharmacopœia revision should occur.

As it has been incorrectly stated that the Congress finally adopted the draft of the International Pharmacopœia, we append translations of resolutions actually passed. The first, on the motion of Mr. Gille, was thus expressed:—

"The members of the Commission of the International Pharmacopœia, not having been able for want of time to sufficiently consider the draft prepared by their President, M. Von Waldheim, resolve that this printed draft shall be presented to the Congress as the basis for discussions, and they reserve their judgment of the work as a whole. They thank their President for his labour in producing this work."

The second, proposed by M. Mehu:—

"The Commission of the International Pharmacopœia, appointed by the London Congress in 1881, has only incompletely fulfilled the duty entrusted to it. The Commission asks that the powers which it holds from the London Congress should be continued until the next Congress in order that the work may be finished (*afin qu'elle puisse mettre la dernière main à son œuvre*). M. Zanni is proposed as a member of the Commission to represent Turkey."

These resolutions, it will be seen, are drawn up in the name of the Commission, but they were submitted to and ratified by the Congress.

THE CLOSING MEETING.

THIS was held at 4 P.M. on Saturday, September 5, M. Van Bastelaer presiding.

M. VAN DE VYVERE first read a brief report of the proceedings of the general assemblies, and stated that the Executive Committee had been asked to constitute themselves into a permanent committee to carry out the resolutions of the Congress. They accepted the duty with joy, and would watch over the interests of international pharmacy with the utmost care.

THE PRESIDENT then called upon the secretaries of the sections to present their reports of the work accomplished. The resolutions adopted in the sections would now be put to the General Assembly, which would vote on them *Oui* or *Non*, but no discussion would be permitted.

This process was commenced, but the sections had passed so many resolutions, and these followed each other so rapidly, that the display of right hands at almost regular intervals was beginning to have a ludicrous effect. *Pour éviter cette gymnastique*, M. Van Bastelaer said he would simply put the question whether there was any opposition. This plan allowed the resolutions to run on merrily, though on one or two of the questions, such as the limitation of pharmacies, the title of doctor, and the specialty decisions, a few hands were held up in opposition. On the specialty resolution two gentlemen asked leave to speak. The President said they might put a new resolution, but they must not enter into the merits of the question. It appeared, however, that they only wanted to relieve their souls by an additional protest against the nefarious business, "to drive the dealers out of the temple of pure pharmacy," as one of them picturesquely expressed himself, and, this appearing, they were quickly checked by the President.

On the question of an international journal M. Van Bastelaer, on behalf of the permanent committee, asked for a modification of the terms of the resolution. As drafted it would have pledged the committee to undertake such a publication; he asked that they should only be required to consider it. This was accorded.

All the resolutions were quickly adopted, and thus became decisions of the Congress. Next, a single comprehensive vote of thanks, proposed by M. Bettincks (Holland), was passed to King, Government, President, and Secretary. And now came the question of the next Congress. No one rose to offer an invitation, but, on the proposition of Mr. Carteighe, the President and all the Vice-Presidents withdrew for a few minutes to a side room to agree on a proposal. They came back with the announcement that they had fixed on Milan as the place, and 1888 as the year, of the next Congress, and M. Cannizzaro promised that the Pharmaceutical Society of Milan would undertake the organisation.

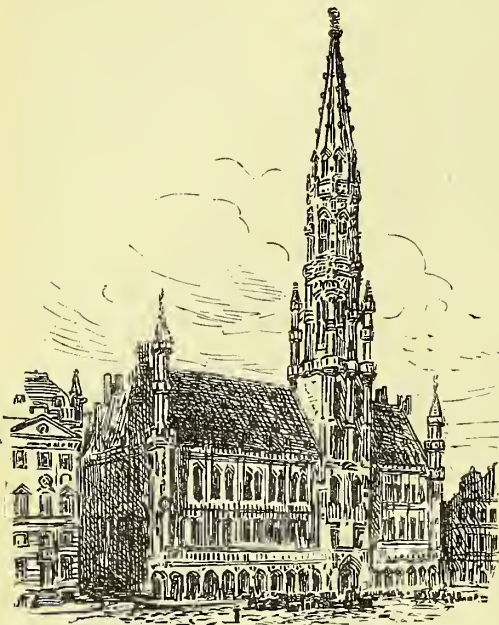
Lastly the proceedings were wound up with a charming little address read by the President, who, in resigning the helm, congratulated the Congress that their vessel had run on no rocks and had met with no tempest. But if they had escaped storms, animation and movement had not been wanting. They were proud that so many men of eminence had done honour to their little Belgium in responding to their invitation. Now that pride was mingled with some sadness. The last grasp of the hand, the parting words must soon be passed, but he asked the members to remember their friends the Belgians, to speak of them sometimes in their cities and in their homes, and finally he asked the Congress to vote by acclamation their desire for the formation of an International Pharmaceutical Federation, the scheme of which should be submitted to the next Congress. He accepted the applause which greeted this suggestion as the approval of his idea, and then declared the Congress closed.

THE ENTERTAINMENTS.

BRUSSELS contains plenty of objects of interest and beauty to occupy for a week the experienced traveller who likes to take his pleasures slowly, if not sadly—who likes to digest his food as well as swallow it. But the Organising Committee of the Congress had not worked for that class. They had provided for every spare minute of seven long working days, and offered besides a long list of places to which the Congressists had special *entrée* if they chose.

On the first evening (Monday, August 31), after the "solemn *seance* of the opening," a concert and *raout* were given in the saloons of the Hotel de Ville by the Municipal Council. M. Walravens, the senior alderman, and M. Becquet, another alderman, received the guests, who arrived from nine to ten and left from eleven to twelve. Abundance of champagne, with some less patrician beverages, and a variety of confectionery, were provided, while the smoke of several hundreds of cigars filled the Gothic halls. The ladies present had no right to complain of this indulgence on the part of their lords, for it appears to have been an extraordinary favour to admit them at all. The next day's official bulletin, in alluding to the fête, said that "par une gracieuseté *sans exemple*, elle [l'administration communale de Bruxelles] avait fait savoir aux membres du Congrès que les dames des MM. les congressistes étaient également invitées à la fête."

The second evening (Tuesday, September 1) the members of the Congress, this time without their dames, were received in a grand formal *seance* at the University. M. Louis Creteur, President of the Society, received the members, and made an eloquent speech. The first magistrate of the city, he said, had received them cordially the previous evening in the



HOTEL DE VILLE.

ancient palace of their communal liberties. He, in turn, had the pleasure to welcome the foreign congressists in the temple of the greatest of human liberties—that of Thought.

Then M. Victor Reding, the Secretary-General of the Society and “Pharmacien de la Cour,” read an interesting historic report of the Society, tracing its development and increasing prosperity during the past forty years.

Diplomas were presented to a number of gentlemen of various nationalities, who were created honorary members and associate members, and the ceremonial part of the evening's duties was over.

Among the honorary members elected were Messrs. Brunker, Carteighe, Greenish, Redwood, Richardson, and Shillinglaw (Melbourne).

All were invited to proceed next to the Hotel Mengelle, which is within a short walk of the University. A substantial supper of fish, meat, game, and confectionery, with accompaniments of champagne and cigars, all provided by the Royal Society of Pharmacy, was spread for the numerous guests. The Minister of Foreign Affairs, the Governor of the Province, M. Walravens (the senior alderman), the Rector of the University, and other eminences were included in the “assistance,” and some of the chief singers of the opera-loving city contributed to the enjoyment. The party broke up towards midnight.

On the evening following (Wednesday, September 2), steam-tramways conveyed some 200 of the hosts and visitors to the Bois de Cambre. After a longish walk by torchlight, the party were conveyed in numerous sections across a lake by a floating bridge, landed on an illuminated island where a band played national airs and a selection of music, and where a most accommodating *café* supplied whatever beverage happened to strike the traveller's fancy, and where no subsequent trouble about *l'addition* was permitted to disturb him.

On Thursday, September 3, the sessions were suspended, and the majority of the members of the Congress repaired to Ghent on the invitation of the Union Pharmaceutique de Flandres. Reaching home from the “garden party” of the

previous evening at midnight, it was good work to come up smiling to the Northern Station at eight o'clock in the morning. Tickets at half-price were served out, and a journey of little over an hour brought the Congress to the ancient capital of Flanders. The party marched first to the Hotel de Ville, where they were received by the Burgomaster, M. Lippens. This gentleman solemnly assured the Congress that he was following with the deepest interest all their discussions, and hoped to obtain therefrom some suggestions for the better hygienic government of that city. He begged to offer wine to the Congress, instead of the hydra with which his ancient ancestors received their visitors.

A special session of the Union Pharmaceutique was held, at which a number of honorary members were appointed, including Messrs. Brunker, Carteighe, and Redwood. Amid the warmest enthusiasm M. Van de Vyvere was proclaimed an honorary vice-president of the Union, the audience all rising to applaud and thank him for the enormous work he had done as secretary of the Congress, to which M. Van Bastelaer bore graceful witness.

The afternoon was devoted to dinner and to visits to the places of interest in the city, while in the evening the visitors were entertained at a concert in the Zoological Gardens which had been organised by the pharmacists of Ghent. Heavy rain fell in the evening, but it did not reach the spirits of the vigorous excursionists, who stayed till the last train.

On one day a visit was made to the School of Pharmacy of Brussels. Here M. Depaire, a professor, explained the pharmaceutical courses and examinations, and pointed out the various departments of the school. It was stated that a Government-appointed Commission supervises the examination, and grants the diploma only after assurance that, besides passing the examination, the courses have been strictly followed. Besides the educational curriculum, two years of apprenticeship are required after the preliminary examination. The school consists of a basement, with warming-apparatus, warehouses, &c.; a spacious and well-fitted laboratory, occupying the ground-floor; theatre on the first floor, in which had been admitted an exhibition of pharmaceutical apparatus by Messrs. Leybold & Williquet; on the same floor the private laboratories of the professors; on the second floor the microscope-room and the examination-rooms, including a special laboratory for examination in practical chemistry; and, on the third floor, a materia-medica collection and a museum of instruments necessary for the practice of the pharmaceutical profession.

On Saturday, Sept. 5, some 250 of the congressists met for a closing banquet held on the floor of the Bourse. Numerous ladies were present. A good dinner was provided at 5*fr.* per person, but the deafening strains of an infamous brass band considerably moderated the enjoyment of the first part of the festival.

The President proposed the health of the “King and the Royal Family.” This was heartily drunk, and his Majesty was apprised of the fact by telegram. A reply was received half an hour later from his aide-de-camp, declaring that the King was extremely touched by the news, and begging that all might be warmly thanked for their toast.

The Prince de Caraman Chimay, replying to the toast of the “Ministers,” assured us that the Government was waiting anxiously to know the resolutions of the Congress. He drank in return to the “Emperors, Kings, Princes, and Presidents” of all nations represented at the Congress.

A few other speeches were rapidly got through, the orators being M. Van de Vyvere, M. Victor Reding, Dr. Brüngruber (who spoke in German), and Mr. H. N. Draper, who, in English, offered on behalf of the little island of which he was the representative, the warmest thanks to the pharmacists of Brussels for their welcome. He also desired to thank M. Von Waldheim for the new appellation, “Irici,” which in the International Pharmacopœia he had bestowed on those who had formerly know themselves as “Hibernici.”

The speeches were over by half-past nine, and an hour was occupied in conversation.

The next day (Sunday, September 6) there was an excursion to Antwerp, a visit to the Exhibition, a trip on the Scheldt, and an ultra final banquet, but we have not received reports of these proceedings.

THE "TIMES" ON THE PHARMACEUTICAL CONGRESS.

Our telegraphic intelligence informs us that the pharmacists of the world are holding high revelry in Brussels, where they are gathered together in an International Congress, for the purpose of discussing some matters kindred to their art, and others which at first sight appear to be somewhat beyond its province. We understand by "Pharmaceutical" that which relates to the preparation of medicines; and we yield to none in our recognition of the value and importance of the vocation so described. It is an excellent thing that those who are engaged in it should meet and exchange views and experiences, and that they should be courteously received and kindly welcomed by ministers and municipalities. Their efforts should be mainly directed to secure that all who are permitted to engage in pharmacy have been duly trained to the responsible work which will devolve upon them, are acquainted with the characters of drugs and medicines, with the methods of procuring and of preparing them, and with the tests by which imperfect quality or adulteration may be detected. The programme of the Congress at Brussels, however, goes much further than this, and embraces matters which have no apparent connection with the special occasion of the meeting. The sections have been discussing, or are to discuss, among other things, "the project of an International Pharmacopœia," the "adulterations of human food," with reference also to legislation and administrative service, and the "characteristics of potable water," with the further question, "what, in the present state of science, are the best practical procedures to be recommended for recognising these characteristics." These are very important questions, and it is probable that the President, M. van Bastelaer, is right in his opinion that the one relating to water is the most important of all. But they are in no sense "pharmaceutical," and persons engaged in pharmacy are not necessarily specially qualified to discuss them. It is true that the potability of water is to some extent a chemical question, that most pharmacists have some knowledge of chemistry, and some a very extensive knowledge. But the considerations which must be taken into account in discussing the potability of water require a totally different amount and kind of knowledge and practice from any which is needed for the preparation of medicines.

It is, however, far better that the question of the potability of water should be discussed by a pharmaceutical congress than that it should not be discussed at all. . . . We will, therefore, not only forgive the pharmacists for introducing a discussion on the potability of water into their proceedings, but will most heartily wish them success in diffusing a kind of knowledge which is calculated to be of the greatest possible value to mankind.

With regard to the other topics on which the Congress appears to be somewhat transgressing the limits within which its activity might have been confined, we are distinctly less hopeful. The construction of such a body of formulæ as would constitute a pharmacopœia must be the work not of pharmacists, but of physicians. A pharmacopœia is a book intended to give expression to the requirements of prescribers, and to insure that these requirements shall be fulfilled. In order to render it international there must be some sort of compromise between the representatives of the various nationalities concerned, some agreement as to what preparations shall be sacrificed and what shall be retained. Such an agreement can only be arrived at, if at all, by those who will order the selected preparation, and who certainly would not submit to even the appearance of dictation from those whose province it is to supply them. It may be questioned, moreover, whether an international pharmacopœia would be of the smallest practical utility. As far as this country is concerned, it would certainly involve the sacrifice of the customary weights and measures in favour of the adoption of the metric system, which has many disadvantages as well as advantages, and which would, at least, entirely disarrange the present relations between wholesale and retail transactions. There are chemists in London who are perfectly familiar with Conti-

mental forms of prescribing, and chemists in every considerable Continental town who are familiar with English forms; and upon neither class are the demands either frequent or important.

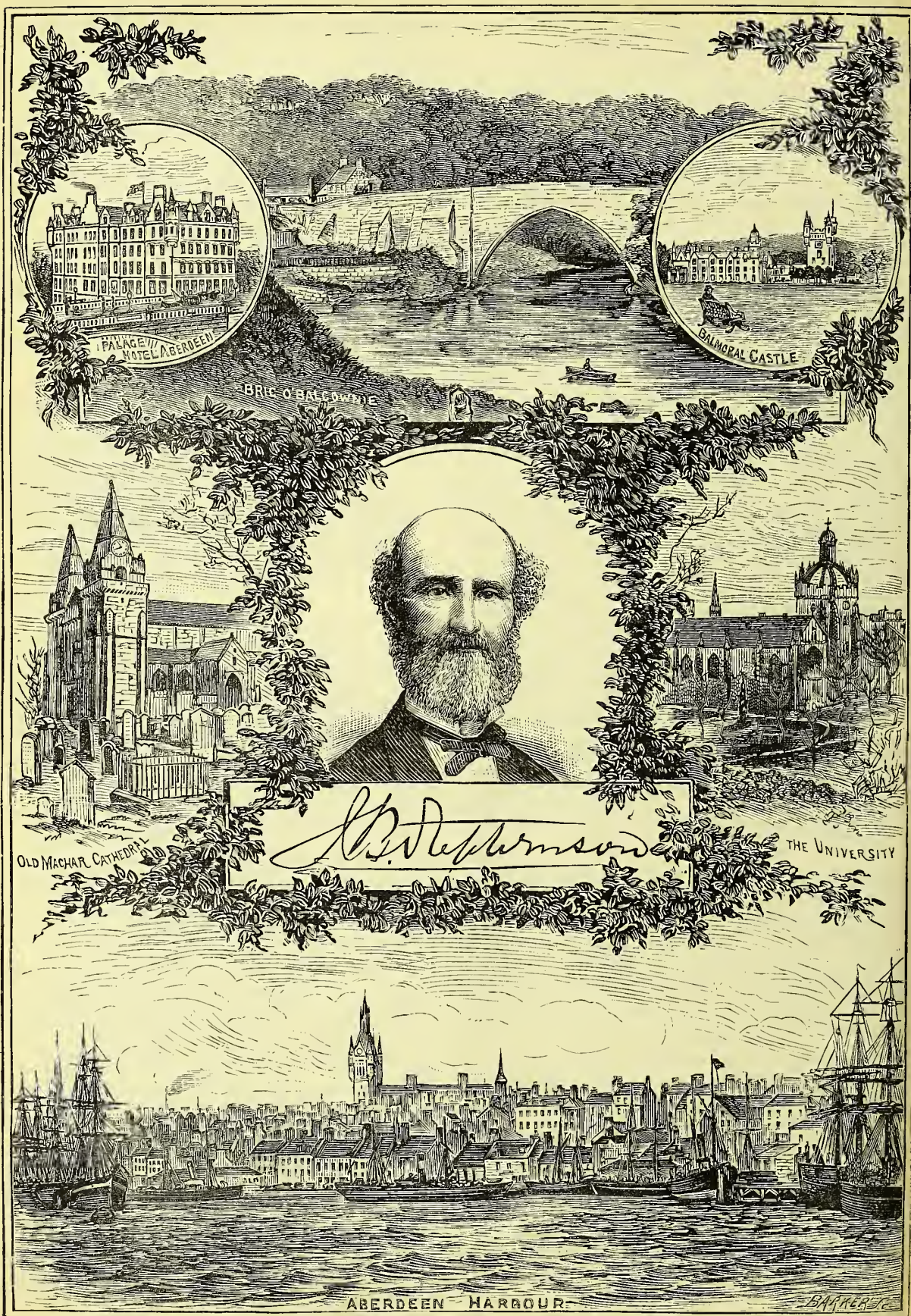
As for the adulteration of human food, it is pursued as a fine art by large manufacturers, who have skilled chemists in their employment for the express purpose of facilitating their frauds. The adulteration of the small dealer is utterly insignificant, and only that of the wholesale man is really worth pursuing or inquiring into. This is conducted by the aid of science, and the contest between adulteration and the means of detection is like that between criminals and the police, or between armour-plates and artillery. Each side gains temporary advantages over the other, and each in its turn is defeated by its antagonist. As long as adulterators have command of capital, are able to purchase skill, and can make large profits out of their nefarious proceedings, so long their trade will be carried on; and the only way in which it could be suppressed would be to abandon the principle which is involved in the infliction of fines, and to render adulteration punishable by disgraceful penalties, which should reach the principal offender instead of his subordinates. Until such a change as this is brought about, the speakers at pharmaceutical congresses will exert themselves in vain; and such a change is hardly to be expected as long as politicians of the calibre of Mr. Bright are content to describe adulteration as a legitimate form of competition. There is no possible middle course. If it involves only pecuniary penalties, adulteration will be skilfully pursued by persons of presumed respectability, as long as it continues, on the whole, to pay. If it were once treated and considered as a fraud and a robbery, and punished accordingly, it might fall into desuetude.

"PUNCH" ON THE PHARMACEUTICAL CONGRESS.

Bruxelles, September 6.

The sub-sectional meetings of the Congress were continued this afternoon, and, consistently with the spirit of far-reaching and enlarged philanthropy that has inspired their labours, resolutions were unanimously adopted to the effect that an international understanding should be arrived at not only for the guaranteed potability of non-alcoholic beverages, and advertised mineral waters, but that butchers' meat, vegetables, and bread and cheese should also be included in the *corpus* of the new Universal Pharmacopœia. The qualifications needed, as a minimum of preparatory study, were discussed at some length; and it was finally agreed that a knowledge of advanced trigonometry, calisthenics, not less than three foreign languages, history, biography, zoology, and a full acquaintance with all the applied sciences, should be regarded as necessary to the taking the new degree of "Doctor of Pharmacy." Perfect unanimity prevailed, though some *éclat* and liveliness was added to the complimentary *fêtes* held in the evening, owing to the expulsion of the proprietor of a well-known English popular patent medicine, who had attended the Congress apparently through a total misconception of its liberal aim and objects.

MENTHOL IN DENTISTRY.—Dr. Flagg, in the *Cosmos*, finds menthol crystals dissolved in oily carbolic (Merck's creasote), in proportions of 3 to 5 grains to 1 drachm of acid, makes one of the most potent of pulp-soothers. Made into paste with viscid cosmoline, it is possessed of marked efficacy in quieting peridental irritation in such cases as are somewhat relieved by opening into the tooth; used by being placed, from small probes, into the pulp cavity and canals, and covered, not too tightly, with dry pellets of cotton. As an ingredient of "inspissated canal pastes" (for permanent filling of canals), its record is really quite remarkable, as numbers of teeth which have failed to yield to ordinary treatment (acetate of morphia, eucalyptus oil, iodoform paste, &c.) have now remained comfortably "stopped" for varying periods of time ranging from three months to nearly a year. As an adjunct to oil-of-cloves ointment, and even to aconitia ointment, results have been eminently satisfactory when used externally in cases of so-called "neuralgia," and in swollen conditions concomitant with alveolar abscess. Ointments are made by spatulating a few crystals of menthol into other ointment mass.



T H E

British Pharmaceutical Conference.

TWENTY-SECOND ANNUAL MEETING, ABERDEEN, 1885.

ABOUT seventy members assembled in the rooms of the Young Men's Christian Association, at 10.30, on Tuesday morning, September 8.

Mr. J. Sim, the convenor of the local committee, gave a cordial welcome to the Conference, expressing the hope that the arrangements which had been made would ensure a pleasant and profitable meeting.

Dr. Thresh read a list of delegates to the Conference.

Mr. Plowman, hon. secretary, read a long list of names of members who had written to express their regrets and apologies for absence.

Mr. Plowman next read the

REPORT OF THE EXECUTIVE COMMITTEE.

THE report stated that the Committee had met six times since last year. One important subject which had engaged attention had been the production of a general index for the published volumes of the Year-book. It had been estimated that the production of 1,000 copies would cause a loss to the Conference of 120*l*. But the Committee had unanimously resolved that the index should be prepared and bound uniformly with the Year-book, and that it should include reference to the volume for 1885. A sub-committee was appointed to arrange details, and Mr. Passmore was entrusted with the compilation of the work. The book would probably be ready for distribution about the beginning of April next. The Committee believe the usefulness of the work would justify the expenditure, though the financial condition of the Conference did not better admit of it now than formerly. Therefore it was hoped members would co-operate in obtaining new subscribers.

A large number of applications for membership and expressions of sympathy had been received from abroad through the colonial secretaries, and communications on native products had been promised. A number of native Indian gentlemen had joined the Conference through Mr. Kemp and Dr. Kernot. Mr. Shillinglaw had forwarded the tenth decade of Baron von Müller's "Eucalyptographia," completing the series. Mr. David Hooper had sent a paper for this Congress from Ootacamund.

Allusion was made to the Brussels Congress, and to the suggestion made as to changing the date of the Conference; but it had been found that there was practical unanimity against any such change.

The Committee expressed regret that they had again to allude to the expenditure of local committees on entertainments. They had hoped that the resolutions passed would have checked such expenditure, but they viewed with regret the large expenditure which was probable at this meeting. They fully recognised the generous impulses of local committees, but reminded them that they are not required to spend any money whatever on entertainments. Visiting members would be grateful, and more than satisfied, if they were welcomed with hearty goodwill, and if good local organisation were secured without that undue expenditure which has characterised some of the Conference meetings.

The second moiety of the grant of 10*l*. had been paid to Professor Dunstan, whose report would be presented to this meeting, but no further grant in aid of research had been made this year. Mr. H. G. Greenish had again been prevented from completing his research on *Nerium oleander*.

Two papers submitted for this meeting had been considered

unsuitable, and the authors had been requested to withdraw them.

Mr. Siebold had been re-appointed editor of the Year-book, and had completed the preparation of parts 1, 2, 3, and 4 of the volume for 1885.

The addition of 216 new members was noted; of these 150 were from the colonies and abroad. The names of many whose subscriptions were more than two years in arrear had been omitted.

Mr. Unney presented the

FINANCIAL STATEMENT FOR THE YEAR ENDING JUNE 30, 1885.

*The Hon. Treasurer in Account with the British
Pharmaceutical Conference.*

		<i>Dr.</i>			
		£	s. d.	£	s. d.
July 1, 1884—					
To balance in hand at Bank..	..	..		323	10 6
„ Balance in hand with secretary ..	..	..		3	5 6
June 30, 1885—					
To Sale of Year-book by Publishers ..	..	31	6 8		
„ Sale of Year-book by Secretary ..	..	14	12 6	45	19 2
„ Advertisements, 1834 vol. ..	..	103	5 0		
„ „ 1833 vol. ..	..	11	13 0		
„ „ 1832 vol. ..	..	0	6 6		
				120	9 6
„ Subscriptions from members ..	..	..	..	759	3 5
July 2, 1834—					
To dividend on Consols, £250 ..	..	..	..	3	13 5
February 17, 1835—					
To sale of Waste Paper ..	..	..	..	0	8 10
Total ..	..	..	..	1,253	10 4
		<i>Cr.</i>			
		£	s. d.	£	s. d.
June 30, 1885—					
By Expenses connected with Year-book:—					
Printing, binding, and distributing ..	482	17 7			
Editor's Salary ..	150	0 0			
Advertising and Publishers' charges ..	33	9 6			
Foreign journals (Dd. Natt) ..	4	15 6			
Blake C. Carter (Indexing) ..	5	0 0			
				676	2 7
„ Secretary's Salary (Mr. Princep) ..				100	0 0
„ Printing and Stationery ..				46	9 10
„ Postages ..				58	0 0
„ Petty Cash ..				8	10 10
„ Expenses of Hastings Meeting and advertising ..				7	14 0
„ Secretary's Expenses, Hastings (Mr. Princep) ..				5	0 0
„ Grant to Mr. Dunstan, Oxford ..				5	0 0
„ Addressing Circulars and Distribution of Bills:—					
Victoria Secretary ..	3	16 8			
South Australian Secretary ..	0	13 4			
Canadian Secretary ..	0	13 11			
Bengal Secretary ..	1	10 0			
Victoria Secretary ..	1	10 2			
South African Secretary ..	1	5 0			
				9	9 1
„ Bank Charges, 1 <i>s.</i> 1 <i>d.</i> , 2 <i>d.</i> ..				0	1 3
„ Warrant and Transfer of Consols ..				0	16 0
„ Messrs. J. & A. Churchill's account ..				118	6 8
„ Balance at Bank ..				220	16 7
„ „ with Secretary ..				0	3 6
Total ..				1,256	10 4

		£	s.	d.
	Balance at Bank ..	220	16	7
July 1, 1885, Assets	Messrs. J. & A. Churchill	118	6	8
	Cash in hand ..	0	3	6
Total ..		339	6	9

THE BELL AND HILLS FUND.

	Dr.	£	s.	d.
July 1, 1834—				
To Balance in hand at Bank..		25	16	9
„ Dividend on Consols, 350 <i>l</i> .		5	2	10
January, 1835—				
To Dividend on Consols, 350 <i>l</i> .		5	2	0
Total ..		33	1	7

	Cr.	£	s.	d.
June 30, 1834-85—				
By Purchase of Books for Hastings		13	3	5
„ Balance in hand at Bank ..		22	18	2
Total ..		33	1	7

		£	s.	d.
July 1, 1835. Assets	Cash ..	22	13	2
	Consols ..	350	0	0
Total ..		372	18	2

Audited and found correct.. { A. I. JOSEPH, St. Leonards-on-Sea.
J. PATERSON, Aberdeen.

Mr. Davidson, as an auditor, remarked on the minute accuracy of the accounts.

Mr. J. B. Stephenson, President, read the

PRESIDENTIAL ADDRESS.

GENTLEMEN,—I do not at all misunderstand the reason why I find myself in this exalted position—a position far beyond what I have ever expected or hoped, or, I may say, even wished for. The Conference, in the view of meeting in Scotland, wished to pay a compliment to our nationality by having a Scotsman in the chair—a compliment which we Scotsmen fully appreciate—and they found in me that qualification. For the rest I feel that circumstances which may more truthfully be called accidental than anything else have assigned me a certain prominence among Scottish pharmacists, and I think it possible—and I mention this because it has been wonderfully reassuring to my own mind—that perhaps the Conference, somewhat sated with the high position and scientific attainments of former presidents, may have turned with a kind of relief to one whose only qualification is that he is a plain pharmacist, in no respect above or different from what the great majority of the members of this Conference themselves are. And I am confident that the same kindly feeling which has placed me in this chair will not be wanting to support and forbear with me in the discharge of its duties.

Gentlemen,—In the few remarks by which it is my duty to preface the proper business of this meeting, I feel that I shall best justify your selection of me by speaking simply as a pharmacist and a Scotsman, avoiding every subject and every reference except such as we can all as pharmacists be interested in and sympathise with.

THE POSITION OF PHARMACY.

I think the true character and position of pharmacy may be defined in something like the following way. There is a certain portion of the medical field, not a very large nor the most important part, still an integral part and a well-defined, and an increasingly important part, which can not only be cultivated better, but cannot be adequately cultivated at all except by a class of workers devoted to it. This I take to be the standing ground of pharmacy, and the function belonging to it consists in the preparation of remedies for administration to the sick. The word "Dispensing," whether correct or not, represents to our mind the exercise of this function.

The word does not include the manufacture of many of our chemicals and preparations, which, for the sake of expediency, is relegated to special workers, but the reservation does not derogate from the qualifications of the dispenser, who ought to be competent to verify the purity and the potency of every article he deals with. This position of pharmacy as an integral part of the medical profession is one which I am sure will be admitted by all now hearing me, and I am not sure but that by the medical profession and the public at large it will be conceded *in theory*, however much it may be disregarded in practice. But more than that, it is a *statutory* position. The Pharmacy Act of 1868, by establishing the Register of Chemists and Druggists, and appointing the examinations for the purpose of gauging the qualification necessary in order to being placed on it, and delegating to the Pharmaceutical Society the duty of conducting these examinations, has certainly given pharmacy a statutory position, and constituted the Pharmaceutical Society the statutory exponents of it. True, the State has jealously guarded these examinations by requiring the approval of every examiner by the Privy Council, by carefully separating the Boards of Examiners from the Executive of the Society, so that no one can be a member of both at the same time, and by requiring the presence of its own medical representative at our examinations; but the jealousy indicated by these requirements, and the responsibility with which the State charges itself in making them, only demonstrates that the true position of pharmacy is recognised by the executive of the country, and that our Society is the statutory exponent of it. And it is this consideration (and I merely mention it, and that without any political reference) which to my mind gives to the Society not only the *right* but imposes on it the *duty*, to take any steps with regard to the examinations which they may consider necessary for their effectiveness, whether by regulating the examinations themselves, or by imposing conditions, such as a curriculum, in connection with them.

PHARMACEUTICAL WORK FOR THE PHARMACIST.

Well, gentlemen, if such be the position of pharmacy, not only in the nature of the case and the fitness of things as we believe, but also by the statute of the land; if pharmacy be so differentiated from the general medical field as to constitute a distinct department of it, there appear to be several corollaries inevitably proceeding from this proposition, which I will ask you to consider for a little along with me. *First*, I would say wherever pharmaceutical work is to be done it should be assigned to the pharmacist. As between the medical practitioner and the pharmacist I am rather proud to believe that in Scotland, and in Edinburgh especially, this differentiation has been more general and more thorough than in the South. From my personal experience of more than forty years in Edinburgh I can affirm that during all that time the dispensing has been exclusively in the hands of the pharmacist. It was not always so, and I think the transference from the medical practitioner was accomplished not long before my entry on the stage, because I have heard elderly medical men tell of their having served as apprentices along with others in the surgery or dispensary of senior practitioners who dispensed all the medicines for their patients, and I can recollect in the early years of my apprenticeship of sundry primitive cases of drawers and sets of bottles and pots which had belonged to Drs. So-and-so, and which had been made over along with the dispensing itself to the pharmacist. Whenever the transference was effected it must have been rapid and complete. I am afraid that in many (shall I say most?) parts of the country the differentiation, as I have called it, is much less complete, and it is much to be deplored in the interests of pharmacy, because whatever else may be necessary for its advance it is evident that this is absolutely indispensable—is, indeed, the condition of its existence. I would apply the principle also to the dispensing in public hospitals, dispensaries, &c., and in the public services. Now, I recollect about the beginning of the period of my own observation I used to be sent to the Leith Dispensary to assist when some epidemic had caused an extra amount of dispensing to be done. This was supposed to be done by the resident surgeon; in reality it was done by the porter. For many years after that time the dispensing in the Edinburgh Infirmary was conducted in a similar manner, *i.e.*, the medical students were the dispensers, there was no dispenser qualified as such, and, as in the other

case, the porter really did the work. In the army and navy, too, until recently the medical man was the supposed dispenser, while the work was relegated as unskilled labour to quite unqualified men. Now, in the public services there are dispensers who must be qualified men. Similarly in hospitals and dispensaries we have dispensers who also must be qualified. I hardly know whether this different system is yet quite general; I only know it is far from uncommon, and how beneficial the change! not only for the patients, but for students of medicine, who now have the opportunity of becoming acquainted with pharmacy proper under the guidance of a qualified pharmacist, which they could not have under the old *régime*. At least, I know from my own experience in Leith, and what I have often heard of other places, it was rather a strange School of Pharmacy in those days. The whole thing was looked on as a mechanical and odious druggery. Not only were such *externals* as we look on as *essentials* quite disregarded, but many practices much more at variance with the proprieties of pharmacy were freely indulged in, such as guessing quantities instead of weighing them, and substituting one thing for another as convenience required, &c. I can quite well recollect the shock it gave my youthful conscience, and I believe there will always be a tendency more or less towards such a state of matters where *dispensing* is not left to the *dispenser*.

THE COMPILATION OF THE PHARMACOPOEIA.

There is another corollary naturally and inevitably deducible from my proposition. If pharmacy be the art of preparing drugs, and if it be a statutory entity, and the Pharmaceutical Society be its statutory exponent, surely that Society should have a considerable share, and a share not as by favour, but of right, in compiling the book whose very name means the preparation of drugs, and which is the statutory authority on the subject. I do not introduce the subject so much for the sake of argument, for I believe that when the question is opened it can and will be settled in only one way. But I mention it more for the purpose of making a Scottish reference. The last Edinburgh Pharmacopoeia dates back further than the forty or fifty years to which my experience is limited, although I well remember the time when Scotland was under its authority, even as England was under that of London, and Ireland under that of Dublin—for was not the British Pharmacopoeia first published in 1864, only twenty-one years ago?—but I happen to know that in those days Sir Robert Christison, who was himself a master in pharmacy, as few medical men are, or, perhaps, can or require to be now, constantly consulted practical pharmacists in my own city, and acknowledged, in his "Dispensary," his obligations to them. And it is within personal knowledge that when the Edinburgh branch of the Pharmacopoeia Committee of the Medical Council was constituted for the purpose of assisting in the compilation of the British Pharmacopoeia, Sir Robert, as chairman of that body, addressed a holograph letter to the North British branch of the Pharmaceutical Society, asking them to appoint representatives of the Society to sit on the Committee along with them; and when one of them—Mr. Macfarlane—died, a second letter from the secretary came to the North British branch asking them to appoint a substitute, which was duly done, and this happened when the Society was the exponent of pharmacy, as we may say, only *de facto*. Now, when we are such, not only *de facto*, but *de jure*, you all recollect how we were approached. I do not know how the London or the Dublin Pharmacopoeia Committees did on the same occasion, whether they approached the representatives of pharmacy as the Scottish one did. I am not seeking to disparage them by any means, but only urging the legitimate claims of pharmacy by a Scottish reference. I was tempted to do so, because my then partner in business—Mr. Robertson—was one of the representatives chosen by our branch, and, throughout all the years of the preparation of the British Pharmacopoeia, and in the adjustment of all the processes, &c., I may, with all modesty, say, "*Magna pars fui.*"

REMUNERATION OF THE PHARMACIST.

There is a third corollary which I wish to draw from my proposition, and I have a little delicacy in doing so, as, on the face of it, it hardly appears a proper theme for this Conference, relating as it does to the remuneration of the

pharmacist; but I feel that it may be treated as a strictly professional question, and it certainly is not my wish or intention to regard it otherwise. It is this: If pharmacy is a professional pursuit it should be remunerated on the basis of a professional fee. Now I do not want to put too fine a point on this. I know too well—which of us does not?—that intrinsic value is a very important factor in the details of our business. I know, like us all, the dual nature of our calling; how the one side looks downwards to the earth and has to do with buying and selling, competing and cutting, and the other looks, as it were, upwards, heavenwards, and only regards the alleviation of human suffering, the dignity of our profession, and so forth. Still I insist that intrinsic value, although very important, is not the most important factor in this matter, and that in all dispensing proper and throughout great part of the other parts of our avocation, the professional fee is the standard of value. Consider the qualification of the pharmacist, as I put it before—his competence to verify the purity and the potency of every article he deals in, the intelligence and skill implied in this, then the responsibility involved in the exercise of his functions, a responsibility to be measured by the momentous consequences which may ensue from any inadvertence, not only of himself, but of any agent employed by him; this, again, involving a personal attention to his business unknown and uncalled for in any other; then the many qualities both of head and hand necessary to constitute a true pharmacist—and they are many indeed—and the question of intrinsic value sinks completely into the shade. Yes, I think it must be admitted that throughout all our dispensing transactions, and many more which are cognate thereto, the professional fee is the true basis of value for our services. But then comes the question of how to apply this principle. In other professions—law and medicine, for instance—the range of professional service is uniform and limited, and the scale of charges is consequently easily fixed and understood. With us, on the other hand, the range of service is wide and multifarious, made up, as it were, of a great many little parts; and there may be endless discrepancy of opinion among ourselves as to its value, and the public, or at least great part of it, will never understand paying money and receiving something tangible for it, as a transaction exactly like paying a doctor or a lawyer, and there will be very unpleasant impressions as against one pharmacist or another. It is a somewhat intricate problem, but it is only to be solved by openly and honourably recognising and acting on the principle which I have enunciated, by making a fair estimation of the imponderable elements in our transactions, intelligence, skill, responsibility, applicable in all cases, and independent of the value of the materials we have to work with. If this be done, and if in concert with brother pharmacists all the better, the results will be satisfactory to ourselves, and not, I am persuaded, disadvantageous to the public. I need not say to this company that such a plan has already been carried into execution in various parts of the country; but I may be allowed to mention that it has come into operation since the earlier years of my experience, that it dates from Edinburgh, and that, as far as I know, it has afforded entire satisfaction.

SALE OF POISONS.

I think it is also a legitimate inference to be drawn from my premisses that the qualification of the pharmacist should cover all his intromissions with so-called poisons, independent of all other restrictive regulations; but, indeed, the whole argument on the point is contained in the very construction of the Act of 1868. What does that Act do? It establishes a schedule of declared poisons, and it constitutes a register of persons who alone shall be allowed to deal in them, the qualification of whom shall be tested by an examination with the responsibility of which it charges itself. What more can legislation do than provide that those who have to deal with poisons shall have a knowledge of their properties and uses? And what more is necessary? Poisoning by inadvertence can never be prevented by Act of Parliament. Nurses may give the wrong medicine, and pharmacists may mistake the right bottle, but there is no means, legislative or otherwise, to prevent it, and for intentional poisoning you may as well restrict the sale of razors to prevent throat-cutting, or of ropes to prevent hanging, as the sale of poisons to prevent that. Let the present restrictions remain. The labelling would be done without them, and the others are clumsy and

unnecessary, at least I never need to conform to them except in cases where I am absolutely certain that the poison is required for a perfectly legitimate purpose, and they cost far more time and trouble than the petty thing is worth. But I admit they, at any rate, do no harm. Let them remain—only, I say, let poisons, however sold, and whether covered by the Government stamp or no, come under their operation. The qualification of the pharmacist is the only security against preventable poisoning which the Legislature is entitled to take, and it has already charged itself with the care of that, and any legislation on other lines is “grandmotherly” legislation, and is as much out of place now as the pharmacy of the days of Romeo, or the apothecary of Mantua himself would be, and will assuredly come to nothing, even as it did in that case.

QUACKERY AND SCIENTIFIC KNOWLEDGE.

There is still another inference which I want to draw from the proposition with which I started, and it is very much of the nature of the application in a Scottish sermon. I have claimed a high position for pharmacy, not higher, however, than I believe it deserves; if this position involves the exercise of professional functions, let us not discredit it, let us act up to it, and this will be effected by cultivating and cherishing the true ideal of it; that mainly will keep us right—*Noblesse oblige*. If I were asked to define the proper attitude of pharmacy in this connection in one word, I would say, discountenance quackery in every shape and form. It is not necessary to tell you what quackery, the thing or the practice, is. If it were, I would refer you to the derivation of the word, the “Quack,” or cry of the duck, and to the dictionary meaning, “To boast, to pretend to skill which one does not possess.” It is the outcome of ignorance, perhaps, but still more of cupidity on the one hand, and unbounded credulity on the other, and it finds a congenial soil on the field of medicine, and especially that part of it occupied by pharmacy, and one of the most mischievous results of its boastful assertions is the giving rise in the public mind to exaggerated and false notions of the true place and the proper value of all remedial agents, and so bringing discredit on honest pharmacy. True science, conscious of how little she knows, makes no boast of it, and has no wish to conceal it; but mystery is the very atmosphere of quackery, the essential condition of its existence, and the secret of its success: “Omne ignotum pro magifico.” I read the other day the address of a university professor to the medical graduates on the occasion of their graduation ceremony, and I noted a remark that the study of all science—especially medical—by showing the infinite mystery of life was fitted to teach the littleness and insignificance of man, and so to produce a reverent and humble frame of mind. Does not the remark apply equally to us? If we consider the wonderful achievements of chemistry, say, how she has within recent years detected and eliminated such principles as morphine, quinine, strychnine, aconitine, remedies of transcendent power and value, and poisons of such tremendous energy that we may almost say that the most virulent of the mineral poisons are feeble or harmless beside them, and how she regards, and justly regards, it one of her greatest triumphs that she has succeeded in synthetically building up a few such principles, although as yet none of those I have mentioned; or still more wonderful achievement, how she has built up from an offensive waste product the whole magnificent series of the aniline colours. Well! but what is all that compared to what Nature is continually doing? She is ever noiselessly building up morphine in the poppy, quinine in the cinchona, strychnine in the nuxvomica, aconitine in the monkshood, and always with undeviating precision and unerring accuracy, and with the simplest of all appliances, the tender plant her laboratory, and her materials only what she finds in the soil and atmosphere. And what are all the colours we can manufacture, and that not without toilsome research and labour, but the very same colours with which she paints with lavish hand and without an effort, every blade that springs and every flower that blows. Surely some such considerations must arise in the mind of every thoughtful member of our profession, and should shame away all boastfulness, and banish quackery from our ranks as alien to the true spirit of pharmacy.

To this address the President added what he called a “cursor and superficial” notice of

THE NEW BRITISH PHARMACOPŒIA.

He considered eighteen years' interval between the Pharmacopœias too long, and hoped that in future not more than ten years would elapse, as in the United States, so that in future the U.S.P. and B.P. might alternate at intervals of five years.

Though containing about 100 pages more than the 1867 edition, the new Pharmacopœia is still more modest in dimensions and style than the U.S.P.

The novelty of introducing proportions in parts seems needless, except in a very few cases, to indicate the proportion of powerful ingredients.

The decimal system has been adopted in many cases. The liquors formerly 4 grains to the ounce (arsenic, morphine, strychnine, &c.) are now $4\frac{1}{2}$ grains to the ounce, so as to make the strength as nearly as possible 1 in 100. He thought the advantage of this is doubtful. It unsettles things for no purpose, so far as he could see.

He regretted to notice the want of any prescribed quantity or accent in the Latin names, as in the U.S.P.

Beyond these criticisms he was much delighted with the work. It bears on every page marks of painstaking and conscientious labour. Among variations noted were mentioned the addition of 2 grains of pulv. tragac. to each ounce of *conf. sulphur*; *emp. belladonn.* from alcoholic extract of the root; *ext. ergot. liq.* prepared with cold water, and without the preparatory process with ether; *glycyrrh. boracis* thinned by addition of one-third of water (why is not *glyc. tannin* so modified also?); *glycerin tragacanth* introduced; *lin. aconit.* and *belladonn.* altered, probably as strong as the former, at any rate quite strong enough; *lin. saponis* made with $\frac{1}{16}$ th, instead of $\frac{1}{10}$ th, of water (why not proof strength?); *lin. tereb. acit.* made with glacial acetic acid, clear and transparent; *liq. Donovan.* to be made by simply dissolving iod. arsenic and biniod. hydrarg. in water; *mucil. tragac.* by diffusing pulv. tragac. in rectified spirit before adding the water; *pulv. glycyrrh. co.* from the original Prussian formula; *ung. citrini dil.* by diluting the strong ointment with 2 parts of vaseline; *acid nitro-hydrochlor. dil.* after dilution, to stand fourteen days before use (a doubtful advantage); *ac. sulph. arom.* from essence of ginger and spirit of cinnamon, instead of from the root and bark (an inconvenient change); *citrate of bismuth* introduced for the production of *liq. bismuth* (a most judicious step); *ext. aloes aquos* to be dried by warm air only; *ferri et quinine cit.*, an increase of citric acid. Infusions to stand for a much shorter time, probably to encourage the use of fresh infusions. The motive is good, but the President was not so sure as to the result. *Liq. ammon. acet.* and *cit.* in concentrated as well as dilute forms—a great advantage, but these had been better made from caustic alkali than from carbonate.

Mist. gentiane omitted. This is the old Edinburgh inf. gent. co., still frequently ordered, and should have been retained, especially as the horrid mist. ferri arom. is allowed to remain. *Pil. phosphor.* to be made with soap, which is to be added to the phosphorised resin before being made into pills. Other changes were noted in *pil. rhei co.* and colocynt pills. Syrups are still saturated solutions of sugar; would it not have been better to adjust the strength so as to have a permanent solution?

We have now liquid extracts of cascara sagrada, cimicifuga, coca, rhamnus frangula, taraxacum. Then the extract cinchona liq. as ordered, with acid hydrochloric and glycerine of the strength 20 per cent. cinchona to 20 per cent. product. The strength of the sarsa is modified in the same way, and is made by exhaustion with proof spirit as well as water, and by the addition of sugar. We have a tr. chlorof. et morph. meant to represent chlorodyne, which it does very well, but it would have been better to have doubled the morphine and more than quadrupled the ol. menth. pip., and omitted the acid. hydrocyanic. Tr. ferri perchlorid. is ordered to be made with a mixture of 2 parts water and 1 of s. v. r. Tr. kino is made from a diluted spirit and glycerine. Tr. quinine from hydrochlorate, vin. ipecac. is ordered to be made by exhausting the root by acetic acid and water, evaporating and dissolving in sherry; the process seems roundabout and clumsy.

The testing of spirit of nitre by estimating its yield of nitric-oxide gas shows that the work is well up to date. Altogether the President's first impressions of the new Pharmacopœia are eminently favourable.

THE ASSAY OF *ATROPA BELLADONNA*. PART II.—THE ESTIMATION OF THE ALKALOIDS IN THE LEAVES OF *ATROPA BELLADONNA*.

By Professor Wyndham Dunstan and Francis Ransom.

IN a previous communication to the Pharmaceutical Society the authors described a new and simple process for the estimation of the alkaloids in the root of the *Atropa belladonna*. This consisted in extracting the root with a mixture of chloroform and alcohol, and removing the alkaloidal salts from this mixture by agitating it with water. From the aqueous solution the alkaloids are liberated by ammonia and removed by chloroform. They had since sought to devise a reliable and convenient process whereby the alkaloids could be isolated without loss in a pure state from the leaves of the *Atropa belladonna*. For this purpose the method which had proved successful with the root had to be considerably modified. In extracting the leaves absolute alcohol alone is to be preferred to a mixture of alcohol and chloroform. By continuous percolation with boiling absolute alcohol the leaves can be freed from every trace of alkaloid. It was found that the best method of separating the whole of the atropine and hyoscyamine from the alcoholic liquid is to dilute it considerably with water acidulated with hydrochloric acid, and then to remove the chlorophyll and fat by repeatedly agitating it with chloroform. In this way an acid solution of the alkaloids is prepared, from which the free bases may be readily obtained pure by adding excess of ammonia and extracting the alkaline liquid with chloroform. Chloroform is by far the best solvent for extracting atropine and hyoscyamine from an alkaline liquid. Ether, quite apart from manipulation difficulty, is required in much larger quantity to effect the same result.

A definite process for estimating the atropine and hyoscyamine in the leaves of *Atropa belladonna* is as follows:—Twenty grammes of the dried and finely-powdered leaves are well packed in an extraction apparatus, and exhausted with about 100 c.c. of absolute alcohol. The alcoholic liquid is diluted with about an equal volume of water made slightly acid with hydrochloric acid. The chlorophyll, fat, &c., are then removed from the slightly-warmed liquid by repeatedly extracting it with chloroform until nothing further is removed by the solvent. The aqueous liquid is made alkaline with ammonia and the alkaloids extracted by chloroform, by evaporating which a residue of pure alkaloid is obtained, and dried by heating it at 100° until a constant weight is attained. A specimen of dried foreign leaves contained 0.22 per cent. of total alkaloid, and a specimen of English leaves which had been somewhat overheated in drying contained 0.15 per cent. But the authors believe that both specimens contain less alkaloid than English leaves which have been carefully grown and gathered.

CHEMICAL REPORT ON THE PHARMACEUTICAL PREPARATIONS OF *ATROPA BELLADONNA*. PART I.—THE ALCOHOLIC EXTRACT OF THE LEAVES OF *ATROPA BELLADONNA*.

By Professor Wyndham Dunstan and Francis Ransom.

THE authors aimed to determine the alkaloidal value of extract of the leaves of *Atropa belladonna*. This required many experiments, but by modifying the method used for the estimation of the alkaloid in the leaves a reliable and simple process was found. This consists in warming 1–2 grammes of the extract with dilute hydrochloric acid until as much as possible is dissolved. The mixture is filtered, preferably through glass or cotton wool, and the residue washed with

hot dilute hydrochloric acid until nothing further is dissolved. The acid liquid is then repeatedly agitated with chloroform so long as anything is removed by this solvent. The acid liquid is now made alkaline with ammonia and extracted with chloroform, which, when evaporated and dried at 100° C., leaves a residue of pure alkaloid. This process is a simple and satisfactory one for estimating the atropine and hyoscyamine in the "green extract" of belladonna. It remains to be shown how far the extract as met with in commerce possesses a uniform alkaloidal strength. The analysis of a carefully-prepared specimen showed the presence of 1.3 per cent. of atropine and hyoscyamine.

THE CHAIRMAN: I could have wished that Professor Dunstan had been here to make his first public appearance since his appointment to the office lately held by our esteemed friend, Professor Redwood; especially as the investigations have been made at the instance of this Conference. There is a great deal of work exhibited in the papers, work which shows bow be and Mr. Ransom have proceeded step by step carefully, and I have no doubt most successfully. Evidently, however, the papers are but an instalment, and we must wait for further information concerning the results of comparative work.

MR. UMNEY: I much regret, Mr. President, that the acoustic properties of this hall are such that it was quite impossible to hear, with any satisfaction, the papers read by Dr. Thresh. I understand, however, that, according to the new Pharmacopœia process, we are now about to discard the alcoholic extract of belladonna leaf, which has long been used in pharmacy, in preparation of the plaster; and that now we are to use an extract of belladonna from root only. I cannot, for my own part, see the necessity of entirely forsaking this extract, especially as the leaves are of a fair alkaloidal value. I had hoped in the new edition of the Pharmacopœia that we should have had an alcoholic extract made from green leaves, and combined in the proportion of 1 in 5 or 1 in 10, as well as that from the root, which is a powerful preparation. I gather from the chairman that he does not agree with the decimal system in the new Pharmacopœia for liquors, &c. The change I think a step in the right direction.

MR. GROVES: The alkaloidal value of the leaves seems very high. I understood from these papers that the alkaloid contained amounted to 2 per cent.

THE CHAIRMAN: No; 0.2 per

MR. GROVES: Well, the acoustic properties of the hall must be bad indeed

MR. MARTINDALE: I am sorry, sir, that I could not catch a word of the papers that has been read, and that therefore I must reserve the remarks I had intended to make. As to the observations, however, that have been made by Mr. Umney, I am glad that the change he objects to has been made. The plaster was always a nasty, dirty green preparation from the old extract, and I speak with some long experience on the subject, as I believe I may say that I have spread hundreds of yards of it. As to the alcoholic extract of leaves, I see there is another paper to be read, which perhaps, we shall be able to hear better.

THE CHAIRMAN: There is not another paper to be read; it was read immediately after the other on the alkaloid in leaves.

MR. MARTINDALE: Well, I never heard a word of it, and was quite expecting it.

MR. ST. DALMAS: I think, Mr. Chairman, that the extract of belladonna which Mr. Martindale referred to as making a dirty greeny plaster is of German manufacture. I use a large quantity of this plaster, and may say that I have spread some thousands of yards of it, and I find that the German extract is not half the value of the English. The English extract is quite clear, and when the German extract is used, and a dirty-looking plaster is not desired, some artificial colouring has to be employed. Probably it is the German extract that Mr. Martindale refers to.

MR. MARTINDALE: I was not referring to the German extract, but to some that I had made myself.

MR. KAY made a few remarks which did not reach the reporters' table.

MR. BOLLAND: I gather from the paper that has been read that no relative strengths have been given. I am sorry for this, as such strengths would be of the greatest service to pharmacists generally, so as to place them in a position to meet the wants of their customers. As to the changes which have been made my opinion is that, while we ought to be quite ready to go forward, we should still pay a reverence to the things that are. Alterations may be made in the Pharmacopœia, new names will be added, and old ones will be dropped out: but customers will continue the use of the names they have long known for the things they require. From my own knowledge I can say that ten times to one the public ask for a "green" plaster, and do not use the jaw-breaker term, "belladonna."

MR. MOSS and MR. WILLIAMS added a few remarks, and Dr. Thresh, in a louder voice, repeated some of the chief points of the papers.

IN consequence of the difficulty of speaking and hearing in the room originally fixed for the meeting, it was decided to remove to a smaller room on an upper floor, which proved quite satisfactory.

NOTES ON COTTON-SEED OIL.

By W. Gilmour.

WE have already published an article treating on cotton-seed oil from a pharmaceutical point of view by the author of this paper. In the paper now read some of the chief characteristics of the oil were commented on, and samples were exhibited.

The cotton-seed oil imported into this country is derived chiefly, of course, from America, the oil being expressed from the seeds of various species of *Gossypium*, and subsequently purified. But the oil extracted and purified in this country is not derived to any extent, if at all, from seeds obtained from America, but from seeds known simply as Egyptian or African, according to the port from which they are imported. The seeds yield from 12 to 20 per cent. of oil, and as first extracted it is a very dark and dirty looking mixture, as shown in the sample on the table. This crude oil has a specific gravity from .928 to .930. After purifying, it takes from a bright pale yellow to a deeper golden colour, and, according to the U.S. Pharmacopœia, should be "odourless, with a neutral reaction, specific gravity .920 to .930, congealing at a temperature near to 35.6° F.," &c. Samples were shown of pure American oil, and of oil home extracted and purified from Egyptian seed. While the two oils closely resemble each other in smell and taste, they differ somewhat in colour, the home-prepared being of a deeper yellow.

The density of the oil, as stated in the U.S. Pharmacopœia as .920 to .930, is correct enough if intended to embrace both purified and crude oils, but .930 is much too high if applied to the refined oil alone, and is misleading if density is to be relied upon as a test of adulteration with the lighter and more valuable oils, such as olive or almond. Out of many samples examined the author has never found the specific gravity below .920, and never above .923.

Considerable variation is found in the freezing-point of commercial samples, some beginning to thicken at a temperature of 45° F., or even above this, while others did not thicken until some degrees below 32°. The former samples were mostly home-prepared, the latter American.

The keeping properties of this oil were next mentioned. One sample kept for nearly ten years, although devoid of the

transferred to the sand-bath, and carefully cooked until the linseed sample was hard and dry. At this stage the two samples of cotton seed were getting a little viscid and slightly sticky, showing that they were in process of drying. The olive and almond samples remained soft and free.

Experiments to ascertain the saponifying power of the oil were made, but it was found that no two samples exactly agreed. Two samples of oils were shown which, as regards their behaviour with alkalies, may be regarded as typical, the one forming an emulsion with the alkalies, but separating more or less after a time, the other utterly refusing to form an emulsion of any kind. The latter oil was known to be genuine, but whether this peculiar behaviour is owing to any physical or chemical difference in the oil from causes already mentioned, or whether it is owing to some peculiarity in the process of refining, has not been determined. One thing, however, had been noted, namely, that if even a small quantity of a saponifying oil, such as olive, be mixed with the cotton-seed oil, it will convert it into a miscible oil with the alkalies.

The practical conclusion to these observations and experiments is that cotton-seed oil, from its sweetness and keeping properties, is admirably adapted as a base for ointments and pomades, but is not suited for forming liniments with alkaline solutions.

EUCALYPTUS OILS.

By Peter MacEwan, Pharmaceutical Chemist.

THIS paper was a reply to the query: "In what respects, other than cost, do the various commercial oils differ?" (Blue list, No. 279.) As introductory a *résumé* of recorded facts was given, the purport of which was to show that it is the oil of *Eucalyptus amygdalina*, and not that of *E. Globulus*, which is, and has hitherto been, the commercial oil used medicinally. Owing to the number of eucalypt species it is not surprising to find considerable difference in commercial oils. The amygdaline oil is, however, the more abundant. From an examination of a number of samples the author concludes that there are two distinct kinds of this oil, the characters of which are fairly brought out in the following table:—

—	Specific Gravity	Odour	Colour	Solubility of Salicylic Acid	Solubility in S.V.R.	Rotatory Power [α] _D	Effect of Sodium	Effect on Blue Litmas
GROUP I. { A	0.887	Cajuput	None	1 in 5	Soluble in own weight {	— 25°-62	Dark yellow	Neutral
GROUP I. { B	0.889	"	"	1 in 6		— 25°-75	Pale red	"
GROUP I. { C	0.883	"	"	1 in 8		— 35°-50	Dark yellow	Feebly acid
GROUP I. { D	0.880	Fragrant	Straw	1 in 9.5		+ 46°-70	Red	Acid
GROUP I. { E	0.886	Fragrant, like mint	"	1 in 10		— 21°-87	"	"
C L	0.876	Very fragrant	Dark yellow	1 in 15	1 in 10	+ 32°-25	"	Very acid
GROUP II. { F	0.874	Fragrant	Straw	1 in 14	1 in 3.5	— 43°-35	"	"
GROUP II. { G	0.872	Very fragrant	Dark yellow	1 in 15	1 in 4	+ 39°-20	Dark red	Intensely acid
GROUP II. { H	0.867	"	"	1 in 15	1 in 5	+ 37°-50	Yellow	Feebly acid
GROUP II. { I	0.862	Fragrant	"	1 in 15	1 in 5	+ 28°-56	"	Neutral
GROUP II. { J	0.876	"	"	1 in 16	1 in 6	+ 32°-50	"	Acid
E D	0.916	Cajuput	None	1 in 5	1 in 1	+ 1°-25	None	Most acid
E G	0.877	"	"	1 in 10	1 in 9 absolute alcohol	— 35°-82	Red	Neutral

nutty sweetness of the fresh oil, had not developed rancidity or smell to any extent. Two samples were shown, one of American origin and one home-prepared, which had been exposed to bright sunshine for nearly four months. They had both bleached somewhat, but had not developed any smell, the taste was still sweet and nutty, and no test detected the least acidity. Under similar conditions olive oil develops both taste and smell, and acidity may readily be detected.

As regards drying properties, experiments showed that those authorities who place this oil midway between a drying and a non-drying oil are about correct. Taking, for example, five weighed quantities of cotton, these were saturated with a weighed quantity of home-prepared cotton seed oil, of American oil, and of olive, almond, and linseed oils respectively, and placed them on the water-bath. Six hours' exposure to this heat having made no perceptible change on any of the samples with the exception of the linseed, they were

Groups I. and II. are commercial oils. Sample C. L. is a museum specimen, eighteen years old, and is genuine; it resembles Group II. oils, but is from the same factory as A and B. C. (sent out as "Ol. eucalypt. glob.") agrees generally with a genuine sample of *E. Globulus* oil (E. G. on table).

It was stated that the yellow oils under sp. gr. 0.880 are more suitable for covering the odour of iodoform than the heavier and less fragrant oils.

Recently, ol. eucalypt. dumosæ has been introduced. This oil is obtained from the leaves of Mallee-eucalypts (*E. incrassata*, *E. oleosa*, &c.). The characters of this oil are shown in the table (E. D.). The author is of the opinion that this oil will not meet the Pharmacopœia requirements, and it is supposed to differ in chemical composition from *E. amygdalina* oil.

As tests supplementary to those of the new B.P. the solubility of the oil in rectified spirit, and solubility of salicylic

acid in the oil are recommended. These tests detect turpentine, with which some oils of German origin are adulterated. The factors which may be taken as a guide are indicated in the tables. It should be noted that solubilities bear a relation to specific gravity.

The PRESIDENT: There are a great many points of interest in the paper that has just been read. It exhibits a considerable amount of research, and it also affords several items of information, and it surprised me, as no doubt it surprised many of you, that some of the specimens are quite colourless, some of them, in fact, being like water.

Mr. UMNEY: I think Mr. MacEwan has done great service in bringing forward this subject at the present moment, especially as now for the first time the oil appears in the Pharmacopœia. I do not regard specific gravity as an important test, but I concur with Mr. MacEwan that oils of a light specific gravity are very suspicious, and many of them look simply like turpentine.

Mr. DORT remarked that he had often had to make careful examinations of this oil, and he could entirely agree with what Mr. MacEwan had said.

Mr. CONROY asked Mr. MacEwan whether he had not always found that the coloured oil possessed the most fragrance.

Mr. G. WARD observed that he quite agreed with Mr. Conroy that the superior aroma belongs to the coloured oils, and that the white oils in odour partake more of the character of turpentine. He also agreed that Mr. MacEwan had given some information which would help to clear up the uncertainty that had hitherto existed as to what kind of oil should be looked for in commerce. Could Mr. MacEwan say whether age affected the rotatory character of the oil.

Mr. MACEWAN briefly replied.

REPORT ON PRESSED ERGOT.

By John Moss, F.I.C., F.C.S.

AT the Dublin Conference, 1878, in discussing a "Note on an Improved Preparation of Ergot," by Mr. A. W. Postans, Mr. T. B. Groves suggested that ergot itself might keep better if it were first ground and then compressed. The suggestion seemed a very valuable one, for strong hydraulic pressure would remove a considerable portion of the fixed oil, which probably has an attraction for the insects that prey upon ergot, and the solid compressed form would offer so much less extent of surface than the ordinary drug, that it might reasonably be expected to be less affected by atmospheric influences. The experiment was accordingly tried in February, 1879, on 7 lbs. of ordinary commercial ergot, which was ground, and then subjected in three separate lots to a pressure of $2\frac{1}{2}$ tons to the square inch. Fourteen oz. of fixed oil (12.5 per cent.) were obtained, and three cakes each about eight inches square. Mr. Groves took charge of half of one of these cakes, and Mr. Holmes placed the other half in the Museum at Bloomsbury Square. Mr. Groves placed his specimen in a store-room, where, as he writes on July 17, 1885, it lay on a shelf "without any special care being given to it. To-day it looks as good as ever; I send you a bit to see. But the question is, how about its potency? does it retain its medicinal activity?" This was the crucial question, and to decide it Mr. Moss made a fluid extract, proceeding as the British Pharmacopœia directs, except that the ether treatment was omitted. Specimens of the cake were shown; in colour it strongly resembles linseed cake, but the grain is much finer. It has the characteristic smell of ergot, and certainly seems no worse for age. Another specimen of the cake sent by Mr. Holmes from the Museum had, when received, a stronger smell, and appeared to be not quite so dry. It had been kept in a bottle, and evidently sweated there. Neither specimen showed signs of insect life, but of the two modes of keeping to let it lie in paper seems the best. The cake readily breaks down with hot water, and absorbs three or four times its own weight. It is convenient also for disintegration by a grater should it be desired to administer the powder.

In order that the liquid extract from pressed ergot might compare on all fours with the ordinary preparation, the increased richness of the cake as compared with ergot, from removal of inert oil, and by pressure and loss of moisture by long exposure in a dry warehouse, was allowed for, as well as an estimated loss of 6 per cent. for moisture. Working on this basis, $\frac{1}{2}$ lb. of pressed ergot was used to make $10\frac{1}{2}$ fl. oz. of liquid extract. A specimen of this shown had the characteristic odour and taste of ergot in a greatly modified degree. It is also paler, and has not the body of the extract as ordinarily prepared. This is no doubt due in part to extractive being carried away in the oil during pressing, and

possibly also partly due to long exposure having rendered some extractive insoluble. This liquid extract had been tested by Mr. M. G. Biggs, M.R.C.S., of Wandsworth, the nature of whose practice affords him abundant opportunity for watching the effects of ergot. A report by Mr. Biggs was given in the paper. Particulars of three cases were given, in all of which the liquid extract from the pressed ergot seemed to have answered quite satisfactorily.

From these observations it appears conclusive that pressed ergot retains full potency after six-and-a-half years, and that no special care is necessary to preserve it from insect attacks, or from climatic influences, which are adverse to the ordinary drug.

The PRESIDENT said the Conference would, no doubt, wish to express their thanks to Mr. Moss for his paper. The result of the experiments so far as they had been tested, seemed very satisfactory.

Mr. MARTINDALE would like to know whether any experiments had been made with the oil which had been pressed out, and if so if it had proved inert. He remembered that in his apprenticeship the oil extracted by ether was regarded as the active portion of the ergot.

Mr. MACEWAN said they had a specimen of the oil at Edinburgh, which had been prepared as ordered in the Pharmacopœia process, by extraction by ether. This oil was of a very dark colour, and the presumption was that it contained something more than pure oil.

Mr. WILLIAMS said in his early days large quantities of this oil were prepared. He remembered that it was of a light yellow colour, and he believed it became darker by keeping. In the old days they used to throw away the portions of the ergot which are now regarded as of value. He understood that within the last twelve months a demand had again arisen for this oil, and that some medical authorities have come to the conclusion that the oil does contain some of the therapeutic properties of the ergot.

Mr. CONROY suggested that probably the fact that the pressed ergot kept so well was as much due to the thorough drying of the ergot as to the removal of the oil. It was impossible to extract all the oil by the pressure which Mr. Moss had employed, and it was probable that as much as 10 per cent. of oil was left in it.

Mr. UMNEY did not understand Mr. Moss to profess to have pressed out all the oil. But he (Mr. Umney) looked upon this pressed ergot as a very useful means of preserving ergot. It was well known that ergot is very liable to attack from insects. If we could trust the foreign collectors it would, no doubt, be desirable that the ergot should be sent to us in this form. The pressed ergot would be less liable to attack from insects. He gathered that 80 parts of this ergot would be about equivalent to 100 parts of ergot in powder. He could not see how the pressure could affect the therapeutic properties of the ergot.

Mr. PLOWMAN, without entering into the medical question, would remark that it is very difficult to judge whether the efforts following a dose of ergot are natural effects or the effects of the medicine. He would ask whether the experiments which Mr. Biggs had made had been numerous. It was the uncertainty in regard to the effects which had led authors to attribute the therapeutic properties to half-a-dozen various ingredients.

Mr. GROVES said we had arrived at the height of absurdity in regard to ergot. No one knows to what its therapeutic properties are due, or whether they are due to several. That being so it seemed desirable to use all. The pressed ergot seems very useful. He had himself suggested it, but the credit of the experiments was entirely due to Mr. Moss.

Mr. ALCOCK asked if the oil pressed out did not carry away some of the active ingredients.

Mr. ABRAHAM asked if the pressed ergot had been tried in other than obstetric cases. His experience was that ergot is now used more for other cases than for these.

Mr. MOSS replied: The oil, he said, had not been tried. He had not been able to re-obtain possession of that which he had pressed. If he did succeed he might inflict another paper on the Conference. He agreed with Mr. Conroy that the keeping properties of the pressed ergot were, no doubt, due to a large extent to the removal of the moisture, but he considered the removal of the oil was also of service in this respect. The less oil there was in the substance the less attractive was it to insects. In reply to Mr. Plowman, Mr. Biggs had made a large number of experiments and was a very able observer. In reference to Mr. Alcock's question he thought the result of his experiments showed that the oil did not carry away any active ingredient. He had no information which would enable him to reply to Mr. Abraham.

LABORATORY NOTES.

By D. B. Dott, F.R.S.E.

Caustic Soda.—Five samples of "soda caustic, P.B." and five of "caustic soda, pure, by alcohol," were examined. The former, with one exception, were up to strength, the percentage of sodium hydroxide varying from 86.5 to 98. In the pure samples the percentage varied from 71 to 87, the

lumps giving the best results, the sticks being inferior. All of these contained traces of chloride and sulphate, and one of them was contaminated with lead. The B.P. lots contained large quantities of chloride and sulphate. It is noteworthy that the samples of "pure" are more than 10 per cent. weaker in real soda than the B.P. samples.

Volatility of Iodoform.—It was found that iodoform loses 0.016 per cent. per hour when exposed to the air in a thin layer at ordinary temperatures. With the heat of a water-bath it loses 6.70 per cent. in the hour.

Volatility of Mercuric Chloride.—The loss in weight at ordinary temperature is extremely slow. In twenty-one days it amounted to only .053 per cent. = 0.0001 per cent. in the hour. At the temperature of the water-bath the loss was equivalent to 0.50 per cent. per hour.

Apomorphia Hydrochloride.—A patient having complained of symptoms of sickness following the administration of a solution of morphia, which was eleven months old, Dr. Hager, after applying some inconclusive tests, decided that the solution must contain apomorphia, and, therefore, that no solution of morphia muriate ought to be used medicinally which is more than a month old. Mr. Dott having in his possession a solution of morphia hydrochloride, which was exactly five years old, submitted it to chemical examination, and found not a trace of apomorphia. There is therefore no evidence (nor the least likelihood) that apomorphia is produced in solutions of morphia salts "by keeping."

As regards the tests for apomorphia, it was ascertained that the deep green colour developed by oxidation in a neutral or faintly alkaline solution is the most delicate and characteristic reaction. The coloration is quite distinct with 1 part of hydrochloride in 100,000 of water. The best method of applying the test is to render the solution (placed in a porcelain basin) just perceptibly alkaline with bicarbonate of potash, when in the course of a few minutes the green colour will be perceptible, if apomorphia is present.

The solubility of apomorphia hydrochloride is 1 part in 50 of water at ordinary temperatures.

Sulphate of Beberia, B.P.—The examination of this salt is beset with difficulties on account of the refusal of the alkaloids or their salts to crystallise in their crude state. As the result of a series of experiments, the author is clearly of opinion that there are certainly two, probably three, and possibly a greater number of alkaloids in the Pharmacopœial sulphate. The total alkaloids amount to about 6.5 per cent. of the salt, and of that quantity beberine constitutes something like a half. The beberine is soluble in ether and in benzine, in which menstrua the other alkaloids are insoluble, or nearly so. The reason of the precipitate, obtained on applying the official test, being entirely dissolved by the ether, is that the other alkaloids are held in solution by the caustic alkali and salts. The different alkaloids are evidently closely related, as the portions of precipitate separated by ether, chloroform, and alcohol, all give precipitates with dilute nitric acid, and have other characters in common. They are very probably derivatives of one and the same base.

Upon this paper the PRESIDENT gave a running comment, in which he paid a tribute to the numerous and valuable contributions Mr. Dott has given to the Conference in the past, as well as at the present time. All the subjects were of a highly scientific character, and would be received, as all his statements had been, with the utmost respect, for he might say that, if any of his statements had been questioned, none of them had ever been upset.

NOTE ON SANTOLINA CHAMÆCYPARISSUS.

By T. Maben, Pharmaceutical Chemist.

OF recent years *Santolina chamæcyparissus* has, in certain quarters, received considerable prominence as a valuable remedy for worms. There has hitherto been great difficulty in procuring the herb through the usual trade channels, and it was this difficulty that induced the author to direct the attention of the Conference to the subject. The plant was formerly much esteemed for its medicinal properties, but it had fallen almost entirely into disuse, and the credit of restoring its popularity belongs to the Rev. Dr. Kirk, of Edinburgh. After quoting a description of the plant from the "Treasury of Botany," the author goes on to say that

hitherto santolina has not been cultivated for sale to any extent. It is only with great care that the plant can be kept alive throughout the winter in Scotland, and, consequently, the price was higher than it would be were its cultivation made a matter of business by gardeners who are favoured with the more genial climatic conditions that prevail in the South of England. Mr. Gaines, of Covent Garden Market, is, however, prepared to supply the drug, and, no doubt, a constant supply of good herb will be forthcoming to meet any demand that may arise.

The decoction is the form in which the drug is recommended for worms, and, when made in the proportion of 4 oz. of herb to 1 pint, the adult dose is a tablespoonful, and half that quantity for children. This is said to be a perfect cure for small worms, though it is useless in the case of tape.

The author has submitted the herb to a partial proximate analysis, with the following results:—

	Per Cent.
Fixed oil	15
Resin, tannin, chlorophylls, bitter principle ..	12.5
Saccharine, amylose, and albuminoid matters ..	60
Cellulose, &c.	56.5
Ash	8.0
Moisture and volatile matter	15.5
Total	100.0

The PRESIDENT: I think that we should record our thanks to Mr. Maben for his paper, and to Dr. Thresh for reading it. The subject matter is one of those things that in this express age have been shunted off the main track. It is well, however, to have one's attention directed to them, especially when, as in this case, several new points are brought out.

Mr. MACEWAN: I quite agree with you, Mr. President, that there are several points of interest in this paper, but perhaps I may be allowed to add that there is one element in it which will not be understood unless I bring it out. To obtain the full amount of benefit from this santolina it will be necessary, I believe, that the patient should belong to a religious denomination of which the reverend gentleman to whom Mr. Maben refers is a leading spirit. That denomination, however, does not exist in Scotland to a large extent, and on that account it is possible that the remedy might not be largely used. Long ago faith was an element in therapeutics; perhaps santolina is just a relic of this kind. Nevertheless, apart from this, Mr. Maben has rendered good service in letting us know where and how cheaply it can be obtained.

PRACTICAL OBSERVATIONS ON NATURAL CAMPHOR OIL.

By John Moss, F.I.C., F.C.S.

THE natural camphor oil of Japan is imported in cases containing two square tins, like castor-oil tins, each holding 40 lbs.

Mr. Moss narrated an experience in distilling some of this oil, which showed that the process is a very slow one. A paper on the oil has been recently published by Mr. MacEwan, who comes to the general conclusion that "the camphor oil of Japan has the camphor removed from it before it is sent to this country," after examining one specimen only. Mr. Moss does not accept this conclusion, because, among other reasons, the distillation experiment described by Mr. MacEwan is not conclusive of the absence of camphor from the specimen he used, though it is conclusive that the said specimen was not a saturated solution of camphor at ordinary temperatures.

Mr. Moss's experience points to very great diversity in the appearance and composition of the natural camphor oil of Japan. Specimens vary in colour from water-white to deep black, the more commonly occurring being a pale straw yellow when seen in a Winchester quart. The specific gravity varies from .898 in the colourless oil to .990 in the very dark, and no two consecutive tins have the same specific gravity. One tin, which was opened in the cool weather of early spring, contained 2 lbs. of the small grains which are familiar as crude camphor; other tins were noticed containing small quantities of deposited camphor, but not during the hot summer weather. During the distillation of the discoloured oil already referred to, at one stage so much camphor came over that the water in the refrigerator was allowed to get slightly warm to obviate choking of the worm. The characteristics of the various fractions of the distillation were described.

From all his observations Mr. Moss infers that the very variable nature of camphor oil is due to a haphazard way of

running it off as produced into the vessels in which it is exported, and the variable proportion of camphor it contains is similarly due to the different temperatures at which the separation is effected. To get a uniform product it would be necessary to bulk the oil from several operations, and then submit it to a definite low temperature. This cannot be got by merely subjecting it to the influence of cold water, of which the temperature varies from day to day, but would be attainable by the use of ice or a freezing mixture.

What has been ascertained indicates the extremely interesting character of this recent addition to *materia medica*, and it is to be hoped that the promise of reward it holds out to investigation will induce further research. For the present it is desirable that importers should secure greater uniformity by bulking all but the very dark oil as it is received. As the demand for it grows, the Japanese may be induced to give more attention and care to the production of what is now only a by-product, and will probably aim at shipping an oil of more uniform character.

With regard to the use of camphor oil, Flückiger and Hanbury say that it is used by the Chinese in rheumatism, and in these islands there is abundant opportunity for testing its virtues in this respect. The low price also suggests its application as an agreeable antiseptic, but its most important uses will doubtless be found in the arts as a constituent of varnishes, and as a foundation for perfumed soaps.

The author remarks, finally, that if Formosa and Borneo camphor oils are prepared with no greater care than Japanese camphor oil, observations made on imported specimens are of little value for reference.

Mr. MACEWAN said that when he wrote his paper on camphor oil he was under the impression that only one kind of Japanese oil came into this country. He had now learned a great deal about it, and confessed that his knowledge regarding the commerce of the oil was very limited. Mr. Moss had done well, and the Conference was greatly indebted to him for a most valuable and interesting paper. He was, however, bound to repeat his previous statement, that there was no camphor in the specimens he had examined. If the colourless oil contained the most camphor, then he said that it was totally different in appearance from lin. camphor, which was viscous. The Japanese was not—it had more the appearance of ether. That was enough to indicate that it could not be a substitute for the *Pharmacopœia* liniment; it was quite possible it might in another direction be a good therapeutic agent. The Chinese and Borneo oils are not commercial in the ordinary sense of the word.

Mr. UMNEY: I shall be very pleased to place at the disposal of any member of this Conference a sample of Japanese oil, of which I have a recent direct import of one ton, and I shall be glad to supply Mr. MacEwan with all he requires to enable him to complete his investigations in this matter. As to the colour, I am inclined to think that that is mainly due to the use of rusty castor-oil tins. I am satisfied that the oil contains a large amount of camphor, and I am also sure that it has a future in pharmacy, and that it will also be used for varnishes. It can be brought into this country at a very cheap rate—almost at the price of turpentine, if necessary. But the shippers have some difficulty in sending it here, as the line of vessels between Japan and this country is of a high class, and shipowners demur to bringing so dangerous a product. In fact, I have had to wait nine months to get a recent consignment to London.

Mr. GROVES: As to the investigation of this subject, which has been suggested by Mr. Umney, I would recommend that it would be better if a specialist were to undertake it. If Mr. MacEwan will do it, well and good; but I would suggest that, in addition, Dr. Tilden be invited to carry it out.

Mr. WOOLNOUGH: I think that the statement made by Mr. Umney that the colour of the oil might be due to the use of castor-oil tins is not quite correct. The Chinese use this oil, and I have seen it a very dark brown, as well as a very dirty colour, when it has not been placed in castor-oil tins.

Mr. MARTINDALE: I think there is a great future for this oil as an antiseptic, and especially as it is free from the poisonous nature of many of the antiseptics now in use.

Mr. PLOWMAN: I have no doubt the oil in question has considerable antiseptic power, but from what has already been said there seems to be an impression that the antiseptic power of a body depends upon its high degree of volatility. This was true as far as the rendering of an atmospheric aseptis was concerned, but for use as a surgical dressing the great volatility of a body is a contra-indication of its use.

Mr. Moss replied, and in the course of his remarks said that he was afraid Mr. MacEwan had misunderstood him, and also that he did not concur with Mr. Umney that the use of tins was responsible for the colour of the oil.

SUBLIMATED SERUM AND SUBLIMATED ALBUMEN.

By H. W. Jones, F.G.S.

AFTER some experience in the use of serum of horse blood, principally in preparing antiseptic gauze, experiments were made with a view of noticing any difference existing between serum from such a source and egg-albumen solution of a corresponding specific gravity.

1. *Serum of Horse Blood*.—The total solids were found to vary between 3.25 and 8.45 per cent. A specimen having the former amount of solid matter and a sp. gr. 1.0201 gave, on analysis:—

Coagulable proteids, 7.016; extractive matters, 0.372; mineral matter, 0.720; fat, loss, &c., 0.142; found on evaporation, 8.250 per cent.

2. *Sublimated Serum*.—Following the directions of Sir Joseph Lister, a clear solution was readily obtained on rubbing powdered mercuric chloride with an excess of horse-blood serum (1 to 200). For the purpose of observing the behaviour of the solution under different conditions, the following portions were set aside. (a) Kept excluded from the air in a stoppered flask.—This remained clear and in exactly the same state for some weeks, but ultimately deposited. (b) Exposed in a tall, open cylinder.—Became in a few days very thick and opaque, and deposited largely. A thick pellicle also formed on the surface, although evaporation had proceeded to a slight extent only. (c) Mixed with an equal bulk of water.—Became thick and opaque almost immediately; but the precipitated matter remained suspended for some days, and then separated. (Sir Joseph Lister in one experiment diluted serum with an equal bulk of water, and obtained a precipitate in the proportion of 1 of corrosive sublimate to 200 of mixed serum and water; but in his case the precipitate was owing to the relative proportion of mercury to serum to give a clear solution being exceeded.) (d) Mixed with 10 per cent. of water only.—Became cloudy soon after mixing, and deposited largely in a few days. (e) Diluted with an equal bulk of 10 per cent. sodium chloride solution.—Remained permanently clear.

3. *Sublimated Albumen*.—The albumen of fresh eggs was abandoned in favour of the dry egg-albumen of commerce, as the latter affords a solution which can be easily filtered. Experimenting with solutions of different specific gravities, it was found that in no case could a solution similar to that given by blood serum be obtained when treated with mercuric chloride. In the proportion of 1 to 500, a clear solution was obtained, but it almost immediately commenced to deposit; and even with 1 to 1,000 a similar result was also after some time obtained. The precipitate thrown down from these weak solutions was examined and found to contain mercury. The solubility of mercuric albuminate in saline fluids being well known, a certain amount would naturally be expected to dissolve in serum and in albumen solution, as both contain alkaline chlorides. The solubility of the albuminate was found to be, however, not merely due to the amount of chlorides, since a considerable excess of the latter is necessary to form a solution.

The difference between the solubility of mercuric albuminate in horse-blood serum and in solution of egg albumen depends probably on the different mode of combination of the albuminous matter with an alkali. By the addition of a small portion of potassium hydrate to a solution of egg albumen neutral potassium albuminate appears as a gelatinous precipitate, which dissolves in the excess of the albumen on shaking, and a solution so prepared closely resembles serum of horse blood in its reactions.

A curious point in relation to the subject is the slowness with which mercuric albuminate precipitates from a solution of egg albumen in presence of an excess of the latter, and shows that much reliance cannot be placed on albumen when used as an antidote in mercurial poisoning, beyond the fact of its acting as an emollient. To test this point 100 c.c. was treated with 1 grain of mercuric chloride, and allowed to stand for fifteen minutes. It was then filtered rapidly under pressure. The precipitate, when dried, only weighed 1.84 gramme, and the clear filtrate ultimately deposited very considerably.

Although a difference obviously exists between solution of albumen and serum of horse blood, in the opinion of the

writer this would not practically affect the substitution of one for the other, since the intention is to produce albuminate of mercury, which, *per se*, is soluble to a certain extent in all albuminous and saline fluids.

For a convenient solution, one having a sp. gr. of 1.020 is recommended, since it is strong enough for the preparation of the usual strength of gauze (1 to 100), and contains, in round numbers, 7 per cent. of albumen. The same solution may also be used for the preparation of dusting powder or ointment. Unless mixed with starch and air-dried the albuminate forms a horny mass, which cannot be finely powdered. An ointment may be made by mixing the moist precipitate with simple ointment, or, better, a glycerite formed by using *Glycerinum amyli* in place of a fatty base. In any case, in preparing an ointment sufficient albumen solution or serum must be used to completely combine with the mercuric chloride, and some means adopted for separating the precipitate from the watery portion.

The PRESIDENT, in proposing the thanks of the Conference to Mr. Jones, remarked on the interest of Sir J. Lister's accidental discovery that serum rendered mercuric chloride non-irritating. If, however, as it appears, an excess of albumen will again render the mercuric albuminate soluble, it will be necessary to reconsider our toxicology.

Mr. MARTINDALE said Sir Joseph Lister had given up the use of sublimed gauze, and was trying in place of it double salts with chloride of ammonium. He had himself made some experiments for him.

Mr. DOTT said there was still a considerable demand for the gauze.

Messrs. DOTT, ALCOCK, and GROVES made some comments on the process described by Mr. Jones. Mr. Groves also remarked that Pereira used to caution his students against giving too much albumen in cases of poisoning by corrosive sublimate, so that the observation noticed by the President was not new.

Mr. WILLIAMS objected to the name "sublimed serum," which suggested to him serum that had been sublimed.

Mr. JONES agreed that the name was an unsatisfactory one, but it had been adopted by Sir J. Lister. One gentleman had asked him whether the sublimed "cerium" was anything like the oxalate. Referring to the toxicological question raised, Mr. Jones said Watts had pointed out that in cases of poisoning by corrosive sublimate the stomach-pump should be employed, as, though a combination of corrosive sublimate and albumen is insoluble in water, it is soluble in saline solutions.

NOTES ON THE DETECTION OF *ENANTHE CROCATI* IN A CASE OF CATTLE-POISONING.

By H. W. Jones, F.C.S., F.R.M.S.

CERTAIN fragments of a root found in a cow's stomach were surmised by the writer to have been derived from *Enanthe crocata*, and to confirm that opinion were examined microscopically and compared with a portion of tuber attached to an herbarium specimen of the plant.

The following particulars of structure are given, the original paper being illustrated by drawings:—A section of a tuber shows it to be largely made up of vascular bundles, and these are connected together by characteristic parenchymatous cells, having thin walls, loosely united with each other, and reaching in individual cases the 1-200th of an inch, though the bulk of the cells are rather smaller. The cells are loaded with isolated starch granules, most easily soluble in liq. potassæ, leaving the cells themselves empty and transparent. The size of the starch granules varies from .00017 inch to .0009 inch. Viewed endways they appear circular, or nearly so; sideways, they appear kettle-drum shaped, with truncated bases. Viewed in winter, concentric rings are scarcely visible, but very fine *striae* may be made out with a high power— $\frac{1}{2}$ inch. The hilum is indistinct. Under polarised light, using a selenite plate, the granules show a good play of colours, polarising better than the majority of starches of the cereal grains, with which they are not likely to be confounded if carefully examined. They resemble tapioca starch, but are of a different size, whilst the absence of the conical hollow under the nucleus would at once distinguish them.

The PRESIDENT said there was reason to believe that cattle-poisoning by *Enanthe crocata* was more common than was supposed. He agreed with Mr. Jones that it was quite desirable to study its chemistry.

The thanks of the Conference were voted to Mr. Jones for this paper.

NOTES ON QUININE SULPHATE.

By R. H. Davies.

THE object of this paper was to ascertain if it be possible to obtain pure quinine sulphate from the commercial salt by crystallisation from boiling water, as asserted by Dr. Hesse. The author found that by repeated recrystallisations a salt was obtained having a greater rotatory power than that assigned by Dr. Hesse to pure quinine sulphate; and, further, that this salt agreed in its specific rotation with the pure quinine sulphate prepared by Dr. Dudemans. He concluded from this that the salt believed by Dr. Hesse to be pure contained a small quantity of cinchonidine sulphate, and that this fact explains the difference of opinion between Dr. Hesse and other observers as to the amount of this impurity usually occurring in the commercial article. By preparing cinchonidine sulphate and mixing it in known proportion with his purified quinine sulphate the author obtained results on examination of this mixture with the polariscope that appear to justify this conclusion. For the mixture which actually contained 5.2 of cinchonidine sulphate yielded 5.3 when calculated on his assumption, whilst if calculated upon Dr. Hesse's the conclusion would be that only about 1 per cent. was present.

The PRESIDENT moved the thanks of the Conference to Mr. Davies, and asked for discussion.

Mr. UMNEY asked if Mr. Davies had noticed the effect of homoquinine on the polariscope when mixed with quinine. It had been shown that this alkaloid is largely present in quinine obtained from cuprea bark, and Dr. Paul had shown that it more readily crystallised with sulphate of quinine than did sulphate of cinchonidine. Cuprea bark (not a cinchona at all, but a remijia) was now largely used for the production of quinine.

Dr. PAUL said much of the sulphate of quinine now met with, and probably much that would be met with for a long time to come, was not obtained from cinchona, but from cuprea, oak, and optical results obtained in regard to one quinine would not be reliable in regard to another. Operating with the polariscope was much less trustworthy than analysis by other methods, and he could not see how Mr. Davies' results proved the purity of his quinine. He did not gather from the paper what was the nature of the original salt experimented upon. With an ordinary sample, such as is frequently sold, containing $1\frac{1}{2}$ to 2 per cent. of sulphate of cinchonidine, he could fully confirm Dr. Hesse's observation that, after one or two recrystallisations from boiling water, a perfectly pure sulphate of quinine could be obtained. But with a sulphate of quinine containing 8, 10, or, as in one case that had come before him, 60, per cent. of sulphate of cinchonidine, a pure salt might not be obtained after twenty crystallisations.

Mr. WILLIAMS had recently wanted to prepare some perfectly pure sulphate of quinine by recrystallisation, and had found that, as it became, as he supposed, purer, it also became more soluble, so much so that it was difficult to filter. He would like to know whether that was a characteristic of its absolute purity.

Mr. DAVIES had not given any special attention to homoquinine. His object had been to settle the question which was in dispute between several authorities, whether it was possible to render sulphate of quinine absolutely pure by one or two recrystallisations from boiling water. He had assumed that the quinine would be pure if it gave a constant rotation after two or three crystallisations, and especially if he obtained the same rotation from another pure sulphate of quinine prepared by another process. If this assumption was right, and he found Hesse's numbers differ from his own, he was bound to assume that Hesse's salt contained something which his did not. He, like Mr. Williams, had found a difficulty in filtering the solution after the salt became pure, but he had afterwards used water which did not need filtering.

ANALYSES OF TARTAR EMETIC.

By A. H. Jackson, B.Sc.

THE author, who gave a summary of this paper, said he had bought two samples of tartar emetic from Manchester pharmacists, and both were found pure. He had also bought five samples from druggists, and found that all were adulterated with sulphate of potash to the extent of from 40 to 70 per cent. Mr. Jackson added that he believed the article as sold by druggists was used in calico-printing.

Dr. MACADAM said that in an experience of upwards of thirty years he had not found any samples of this chemical adulterated. It was important, however, to know that it was liable to such an admixture.

Mr. UMNEY said he remembered to have seen in some of the Continental journals that for the tartar emetic used in calico-printing a double oxalate of antimony and potash was frequently used.

Mr. WILLIAMS confirmed this, and said the double salt was not sold fraudulently, but as a cheaper substitute. He was informed, however, that it was not found to answer so well as the pure salt.

Mr. ALLEN said this was of interest, but he did not see how it affected the paper before them if the author was sure it was sulphate of potash he had found, and not the double oxalate.

Mr. JACKSON thought it could not be the double oxalate, because he had found the proportions of potash to vary so largely. This went to show that it was simply a mixture. He had removed the antimony by precipitation, and the sulphate by barium chloride.

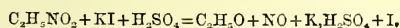
The PRESIDENT said it was satisfactory to learn that chemists sold only the pure article. He was sure the meeting would accord thanks to Mr. Jackson for his paper.

SPIRIT OF NITROUS ETHER.

[By A. H. Allen, F.I.C., &c.]

THE author described a number of experiments to demonstrate the strength of the spirit of nitrous ether, commonly known as "sweet spirit of nitre." While the freshly-made preparation contains from 2 to 4 per cent. of real nitrous ether, on keeping it suffers gradual deterioration; but this becomes much greater when the spirit is diluted with alcohol, and is very rapid when the spirit is diluted with water. Hence the author considers the intentional addition of water to sweet spirit of nitre for the purpose of adulteration to be very reprehensible. Owing to the rapid decomposition of the active principle of the spirit of nitrous ether in presence of water, Mr. Allen expressed a doubt whether any appreciable quantity remained in an aqueous mixture which had been made several days. Hence, when spirit of nitrous ether is to be given as a medicine, it is undesirable to make it up into a mixture to be taken at intervals, the preferable plan being to add a certain measure of the previously assayed spirit to water and give the mixture immediately.

Mr. Allen exhibited the apparatus which he has devised for testing the volume of ethyl nitrite, and gave a demonstration of its use. This test has been introduced into the new Pharmacopœia as one of the tests for spirit of nitrous ether. It is based on the reaction which occurs between ethyl nitrite and potassium iodide in the presence of sulphuric acid, thus—



Mr. DOTT some time since had suggested a somewhat similar test, but he proposed to estimate the iodine, while Mr. Allen's method is simply to read off the volume of gas evolved. The apparatus consists of two glass tubes, connected by an india-rubber tube. Into one tube, which is open, a solution of brine is poured until it mounts quite to a tap, which closes the other tube at about three-fourths of its height. This second tube is graduated both below and above the tap. Into the second tube above the tap is poured 5 c.c. of the spirits of nitre to be tested. The tap is opened, and the spirits of nitre flows through on to the brine. Then in like manner 5 c.c. of a 10-per-cent. solution of potassium iodide are added, and after that 5 c.c. of dilute sulphuric acid. The tube is shaken, the iodine is set free, and colours the liquid, the nitric oxide gas is evolved, and can be at once read off in the graduated tube. A B.P. specimen should show seven times the volume of the sample tested. The sample tested by Mr. Allen yielded exactly 35 c.c. of gas.

As illustrating the extreme rapidity with which spirits of nitre deteriorates if water or diluted spirit be present, the author read a number of analyses. One may be quoted as a specimen. On one warm day 5 c.c. of a mixture of 1 part of spirit of nitrous ether with 1 part of water yielded in the nitrometer, immediately after the mixture was made, 19.4 c.c. of gas, but in the course of three hours had so far deteriorated as to yield only 8 c.c. of gas.

AMYL NITRITE.

[By A. H. Allen, F.I.C.]

IN a second paper on the assay of amyl nitrite, the author said he had applied his method of determining the nitrous ether in sweet spirits of nitre to the assay of nitrite of amyl, and found it to answer very satisfactorily. His first experiments had seemed to be failures, but Mr. John Williams having told him that he found the process very good, he

returned to the subject and then discovered that what had been supplied to him as amyl nitrite was really amyl acetate. It was found that three samples of amyl nitrite, from well-known houses, contained about 80 per cent. of real amyl nitrite, while a sample prepared in a less perfect manner contained less than 50 per cent. of the active constituent. Further experiments showed that a solution of amyl nitrite in alcohol very rapidly deteriorates. A sample which on August 18 yielded 36 c.c. of gas, tested on September 7 yielded only 15 c.c.

Mr. Allen's paper was followed by one from Mr. John Williams "On the Preparation of Amyl Nitrite," which showed the difficulties met with in the manufacture.

Mr. UMNEY was not surprised that the editors of the British Pharmacopœia had adopted this test. It was simplicity itself. He had tried it over and over again with the best results, and his experience quite coincided with Mr. Allen's in regard to diluted specimens. In the new Pharmacopœia he noticed that an attempt was made to obtain a stronger preparation. The sp. gr. formerly stated at .845 is now put at .840 to .845. But he could hardly see how starting with a spirit of .838, together with nitric and sulphuric acids, they could expect to obtain a spirit of nitre of sp. gr. .840.

Mr. MARTINDALE had found Mr. Allen's apparatus very useful in estimating the strength of spirits of nitre. He had not yet had much experience with it in testing nitrite of amyl, but so far he had not been able to get uniform results.

Mr. DOTT considered that the decomposition of this substance was due not to the presence of water so much as to the presence of free acid, and he regarded the process which yielded a spirit which so easily became acid as defective. There had been much discussion as to the constituent to which spirits of nitre owed its therapeutic effect, and it was thought by some that this was due to some unknown principle. But he believed all the constituents of spirits of nitre had been discovered, and that its medicinal value was due to the combination of these.

Mr. MOSS, Mr. CONROY, Mr. MACEWAN, and Mr. WILLIAMS also bore testimony to the convenience and accuracy of the test proposed by Mr. Allen. Mr. Williams said he had found it equally satisfactory in testing amyl nitrite, and he believed Mr. Martindale would be more satisfied with it when he had given it further trials.

Mr. GROVES asked whether the amyl acetate which Mr. ALLEN said had been supplied to him instead of amyl nitrite was a fraud, or an accident. Was it a substitution likely to be met with?

Mr. ALLEN said it was an accident. He briefly replied to the remarks which had been made in the discussion, and the President asked that the thanks of the Conference should be expressed for this paper in an unmistakable manner.

PERMANENT SOLUTION OF FERROUS IODIDE.

[By A. E. Robinson.]

THIS paper opened with a humorous allusion to the abundant literature which has clustered around that peculiarly factious preparation—syrupus ferri iodidi. The various and contradictory methods which had been proposed for keeping it were touched upon, and if some gentleman did not call this paper all "moonshine" the author would feel disappointed in the choice of a subject which has in the past held such a reputation for promoting pharmaceutical discord.

There did not seem to be any reasonable prospect of preparing a permanent saccharine solution of ferrous iodide, so attention was directed entirely to the aqueous solution. Mr. Barnard S. Proctor, at the Southampton meeting in 1882, detailed the examination of what he called "a commercial sample of liquor of iodide of iron," which was purported to be unchangeable in its character; but Mr. Proctor's examination appears to have been more particularly directed to the discovery of some substance which ought not to have been present, and, having established the presence of oxalic acid, left the liquor to take care of itself. Mr. Proctor also proved the presence of sulphurous and phosphoric acids, but it happens that neither of these acids nor all combined will preserve the solution for any lengthened period, as, indeed, he himself admitted.

After quoting processes from other sources which were shown to be either impracticable or unsuccessful, Mr. Robinson narrated his own experiments. He had not tried to arrive at his results by analysing the stable preparations in the market, but had considered how to prevent the reaction which takes place.

We have in aqueous solution ferrous iodide. Oxygen is absorbed, ferric hydrate and oxyiodide are formed, which are

precipitated, iodine being set free, which remains in solution. The reaction may be prevented.

1. By the presence of reducing agents, which, possessing a greater chemical affinity for oxygen than the ferrous iodide, would combine with the absorbed oxygen and thereby prevent its action upon the FeI_2 .

2. By the presence of substances which would combine with the liberated iodine as soon as set free, themselves being converted into products of a higher degree of oxidation.

As an instance of the first process nascent hydrogen may be mentioned. If a platinum plate in connection with the negative pole of a battery be immersed in a solution of ferrous iodide and the positive pole immersed in water, the two solutions being separated by a diaphragm, such a solution of iodide will be preserved of course as long as the current passes, and, if care be taken to prevent increase or decrease in strength, such a process might recommend itself on the score of accuracy, though certainly not upon that of convenience.

First in the second division comes the proverbial screw of iron wire. This is efficacious, in so much as it combines with the liberated iodine; but, unless the solution is decidedly acid, a deposition of oxide and oxyiodide takes place, and the solution is thereby weakened; whilst if hydriodic acid be present, hydrogen is gradually evolved until the effect of the acid on preventing precipitation is destroyed. Moreover, the portion of the coil above the surface of the solution being exposed to the combined influences of air and moisture becomes rusty; the oxide of iron thus formed being gradually shaken into the solution renders it decidedly unrepresentable.

Sulphurous acid, sulphite of soda, phosphoric acid, and hyposulphites were also tried, but not with satisfactory results.

At this period of the investigation, having occasion to remove iodine from an organic compound, and to use phosphorus for its removal, the idea occurred to try the immersion of a stick of phosphorus in a solution of ferrous iodide freshly prepared. The result was striking; the original colour was preserved for some weeks. This, however, could scarcely be considered satisfactory from a pharmacist's point of view, for the consequences of "swallowing the screw" would be trifling compared with those produced by the eating of the stick of phosphorus under the impression that it was "toffee."

Phosphorous acid was tried without result; but hypophosphorous acid gave almost unexpected results. The solutions appeared to retain their colour for an indefinite period. Solutions were prepared of known strength, and, after a considerable number of trials, the following conclusions were arrived at:—

1. That a solution of ferrous iodide eight times the strength of the official syrup could be almost indefinitely preserved in a stoppered bottle, occasionally opened for purposes of sale, &c., by the addition of aqueous hypophosphorous acid, equal in amount to only 1 per cent. of the anhydrous acid H_3PO_2 .

2. That the same solution containing 1 per cent. of H_3PO_2 , if freely exposed to the air in a bottle, would keep perfectly for two months.

3. That, if on continued exposure the solution became decomposed, the further addition of a few minims of acid would restore it to its original grass-green colour, and make a perfectly clear solution free from all deposit; this could be again repeated after further exposure, resulting in decomposition.

The following formula was submitted as the outcome of these experiments:—

Iodine	1,804 grains
Iron wire	2 oz.
Distilled water	6 fl. oz.
Hypophosphorous acid (containing 20 per cent. of H_3PO_2)	3 fl. drachms

Digest the iodine, iron wire, and water at a gentle heat until combination is complete, filter into the hypophosphorous acid, and add sufficient distilled water to make 8 fl. oz.

This will contain in each drachm 34.4 grains of ferrous iodide, FeI_2 , and, when added to simple syrup in the proportion of 1 part to 7 parts by measure, will form syrupus ferri

iodidi of the Pharmacopœia strength as regards ferrous iodide.

N.B.—Care should be taken to ensure the purity of the hypophosphorous acid, as much of that prepared by the usual process, viz., by decomposition of hypophosphite of calcium with oxalic acid, contains oxalic acid as an impurity. This formula, it was added, is merely a suggestion; the addition, however infinitesimal, should first be made known and recognised, and it should remain with the medical profession either to condemn or condone its usage.

The application of the acid to the preservation of other substances naturally prone to decomposition was also examined and found to be very effectual. With syrupus acid. hydriodic., ammonii iodidum, pil. ferri iodidi, ung. potas. iodid., and solutions of the protosalts of iron it is of great service. The decomposition of a solution of sulphate of iron is almost entirely prevented by its addition; this fact will doubtless be of service in photographic work, where solutions of ferrous sulphate and oxalate are in constant requisition.

The experiments were made in the laboratories of Messrs. Philip Harris & Co.

The PRESIDENT: We are indebted to Mr. Robinson for his paper on this interesting subject, but I do not think that the use of hypophosphorus as a preservative is a novel one. It has been used, to my knowledge, for a long time.

Mr. BARCLAY: I remember that I once kept a bottle of ferrous iodide for about fifteen years, and that it was at the end of that time in as perfect a condition as when I made it, and therefore I do not think that it is at all necessary to add hypophosphorous acid. I quite agree with the President that it is not a novelty. Still I think much good is certain to arise from such a paper and the discussion upon it.

Mr. WILLIAMS: I may say that I have used hypophosphorus acid for a long time as a preservative, but I have not sold it, as it would be selling something the contents of which are not wholly stated on the label. For my own part, however, I do not see any objection to the use of it.

Mr. JONES: It has been, I believe, an open secret for some time that hypophosphorous acid has been used for a long period as a preservative. Mr. Robinson, however, is, I think, entitled to the credit of having first made publication of it and placed the formula before us.

Discussion was continued by Dr. PRESSLIE, by Mr. CONROY, Mr. UMNEY, and Mr. MOSS on the point whether ferrous iodide can be kept without any kind of preservative.

Mr. ROBINSON then briefly replied, and in the course of his remarks said: I think that some misapprehension has arisen as to the formula described. I did not give it as an absolute formula, but I merely suggested it, leaving it to the medical man to say whether it should be adopted or not, believing, as I do, that it is not the place of the pharmacist to determine what should be done in cases of this sort.

THE PRESENCE OF METALLIC IMPURITIES IN MATERIALS EMPLOYED FOR THE MANUFACTURE OF AERATED WATERS.

In this paper, which was read by Mr. W. I. Macadam, the object was to show that, notwithstanding an assumed absence of impurities, such as lead, in the sugar, citric acid, tartaric acid, and essence of lemon used for the manufacture of aerated waters, his own recent analyses had clearly shown that such impurities were still present, and to a greater extent than would be supposed, and suggestions were made towards securing the complete freedom of the materials from impurities.

Mr. UMNEY: This subject is by no means a novel one. I remember that, some ten years ago, Dr. Macadam wrote upon it in the *Pharmaceutical Journal*, and the statements that have now been made, and results given, are almost identical with those then formulated. Immediately after the publication of that paper I took the opportunity of repeating most of the processes described by the doctor, and I shortly afterwards replied in the journal. All of us are interested in the production of pure beverages, but at the same time we are all equally concerned in not producing a scare, and, therefore, let us approach this subject with a clear understanding that, so soon as we begin to openly discuss it, we shall be bound to excite alarm in the public mind. We surely can have no desire to do this, nor can any good come of it. That there is lead in acids used for aerated water we cannot deny, but the quantity is so infinitesimally small that it cannot, I think, do any possible harm. Citric acid is made in leaden plant, and a manufacturer told me some little time ago that the loss of lead each year was a considerable item in his working expenses. As to essence of lemon, this is invariably consigned to this country in very thin copper canisters, about $\frac{1}{8}$ inch thick. In order to enable the base of the can-

ister to be strong enough to resist damage it is strengthened by the addition of lead. Yet, in spite of this, the amount of lead in the essence of lemon is remarkably small, and, when it is considered how small a proportion of the essence is used to flavour a bottle of lemonade, the amount is infinitesimal. I think, therefore, that while it is of course desirable that we should have these aerated waters potable and as pure as possible, we ought, as I said before, to be very careful as to what we do in regard to the matter of giving material to the press for sensational articles.

Mr. MACLEWAN said that, calculating on the basis of Mr. Macadam's figures, a bottle of aerated water would only contain $\frac{1}{1000}$ th part of a grain of lead.

Mr. ALLEN agreed that they ought not to be too exacting, but, he added, ought not to be forgotten that lead-poisoning is a very obscure subject, and what is a great trouble in tracing the action of such poisoning is the fact that results are not manifested until the disease has made considerable progress. We do not so much mind a large dose of lead taken now and again, but the difficulty arises in the case of the habitual taking of lead. I have examined, he said, a great many samples of aerated waters from a variety of places, and quite a number of them were entirely free from lead; but what I did find was a trace of tin or copper. The cause of their presence I did not determine. I am not aware of any case on record of death from lead-poisoning through the medium of aerated waters, and if any member of the Conference can give me information upon the subject I shall be very glad, as I am deeply interested in the whole question of lead-poisoning.

Dr. MACADAM: I may just remark that the paper which has been read has been prepared by my son quite irrespective of myself, and also that in respect of the introduction of the word "scare" into the discussion, I think that the best evidence that the subject still requires much consideration. Why should lead be employed at all in the apparatus for making aerated waters, and why, too, should not the acids be prepared in plant quite free from lead? Concerning the small proportion of lead in a bottle of aerated water which Mr. MacEwan has said exists, it only needs a little calculation to show that that quantity would total up to $\frac{1}{1000}$ grain of lead in a gallon of water; and, would ask, What chemist would pass an ordinary water containing such percentage of lead?

Dr. THRESH: Within the last year or two I have had considerable experience in this matter, in the analysis of aerated waters and in the examination of the machinery used in their manufacture, and the results of those examinations and the opinion I formed were diametrically opposed to those stated by Dr. Macadam. In one case I found there was about $\frac{1}{10}$ of a grain of what I took at first to be lead, but which I afterwards found to be copper. How it got there at first much troubled me, but I subsequently discovered that it came from the brass fan in the cylinder of the machine in which the carbonic-acid gas is generated. In another case in which lead was found in the water I examined all the materials employed, but I never found anything like as much lead in citric acid as has been stated. I will only add that pure citric acid can be obtained if manufacturers will only go to the proper quarter for it. As to the oil of lemon, I have never had occasion to examine it, but my experience is that it does contain a little lead, but it never occurred to me that the percentage was so large.

Mr. ALLEN: I should be glad to be allowed to add that I have foundrup containing 2 grains of lead and 2 grains of copper in a gallon.

Mr. DOTT made some remarks regarding a tinned copper vessel in which water which was to be aerated was kept. The water was noticed to become filthy, but on standing cleared, the fine white precipitate having fallen. On examination this precipitate was found to be oxide of tin, formed through electrolytic action between the copper and tin.

Mr. MACADAM, in reply, said: I think that the strictures which have been made upon this paper are sufficient to show the importance of this subject. I quite agree with Mr. Umney that it is desirable to avoid anything like a scare, but cannot that sort of thing be avoided by the use of other plant and machinery for making the acids and the aerated waters? Why, too, is it necessary to send the essence of lemon to this country in copper canisters, and if it is necessary to use the canisters, cannot they be lined with something else besides lead? As to the small amount of lead in the acids and waters, I do not think the question for the manufacturer is so much the percentage of lead and lead-poisoning as his ability to be called up under the Adulteration of Foods Act for the lead being present.

Mr. CONROY: I should like to ask Mr. Macadam what he means by rushed sugar. Does he mean sugar merely crushed down from the lump or that article known as Dutch crushed sugar?

Mr. MACADAM: I mean Dutch crushed sugar.

Mr. UMNEY: I know I am out of order, Mr. President, but I am anxious to help Mr. Macadam to trace the sinners; and would therefore tell him that he can count upon the fingers of one hand all the makers of citric acid in Great Britain and Ireland.

The PRESIDENT: I was under the impression that this subject was brushed out long ago, but evidently there is something yet to be said upon it. My opinion is that this presence of lead in the acids should be stopped, and I can hardly see how it is to be stopped without raising some kind of a scare, or directing public attention to it.

THE COMPARATIVE STRENGTHS OF CERTAIN PREPARATIONS OF IPECACUANHA.

By W. A. H. Naylor.

THAT the ipecacuanha wine of the British Pharmacopœia is an unsatisfactory preparation is the unanimous opinion of those who have had experience in making or storing it. It has been shown that it is apt to deposit considerable quantities of alkaloid, and thus to become comparatively valueless therapeutically. The author, in this paper, recorded an investigation he had made with the object of comparing the alkaloidal strength of the B.P. wine, the U.S. fluid extract, and an acetum ipecacuanhæ made like the wine, but using dilute acetic acid of the B.P. in the proportion of 1 in 20. Samples of each were made from a powder passed through a sieve having sixty meshes to the inch, and samples of wine and of vinegar were also made from a bruised root as recommended in the authoritative formulæ. The results of the assay (the process for which was fully described) showed that wine made from the powder yielded an alkaloid equivalent to 100 grammes of bark = 0.756; acetum, 0.836; fluid extract, 0.720. Wine made from the bruised root, 0.604; acetum, 0.756. It thus appeared that so far as emetine may be taken as representing the therapeutic value of ipecacuanha, of these three preparations the vinegar was the strongest; and that both alcohol and vinegar exert a greater solvent power when the drug is in fine powder than when it is simply bruised. Whether these observations could be applied towards the production of a stable preparation the author did not discuss. Such a consideration might be ill-timed, as it would be only creditable to the distinguished ability of the committee of the British Pharmacopœia to believe that the defects of this and of other old preparations would be remedied in the new revision.

A short discussion followed this paper, but it had more direct reference to the formula prescribed for making ipecacuanha wine in the new Pharmacopœia.

QUINOLOGICAL WORK IN THE MADRAS CINCHONA PLANTATIONS.

By David Hooper, F.C.S., Government Quinologist.

SINCE the disappearance of Mr. John Broughton from the Madras Presidency in the year 1875 no systematic chemical work had been conducted in cinchona culture on the Nilgiris. The author, who had been appointed early last year, entered into his duties last October. The appointment was made with a view to advance the practice of cinchona culture at the Government plantations, "by analysing the bark of a very large number of their trees in different stages of their growth, when treated under different systems and when grown at different altitudes."

Mr. Hooper gave a table of analyses showing the quinine and the other alkaloidal value of a number of different kinds of bark. These results were the averages of numerous analyses. So far as they go it appears that in regard to *Cinchona officinalis* the younger trees are superior to the older ones, and the narrow-leaved variety to the broad-leaved. The following amounts of quinine were determined in three kinds of crown bark from trees of the same age:—

		Narrow-leaf	Broad-leaf
Natural ..	.. .. .	2.65	2.95
Mossed ..	.. .. .	4.03	3.47
Renewed ..	.. .. .	4.48	3.85

The variety of *officinalis* named *angustifolia* some years ago created a widespread interest on account of the extraordinary amount of quinine found in it by Broughton and Howard. Mr. Hooper's samples were taken from a tree twenty years old, 10 feet high, and with a circumference of 18 inches. Mossed gave 5.60, and renewed 4.91 per cent. of quinine. The results show its superiority over ordinary crown barks, but in its present condition it appears to have no claim to be a prodigy in cinchona culture.

Barks from hybrids between *C. officinalis* and *C. succirubra* have received of late a great deal of attention from planters. These, named respectively *C. magnifolia* and *C. pubescens*, yielded from 2.73 to 3.32 per cent. of quinine, the *C. pubescens* yielding the largest amount of this alkaloid.

The *pitayensis* bark is characterised by yielding an unusual quantity of the alkaloid quinidine.

The analysis of the *Ledgeriana* tree at Naduvatam (quinine 5.58, cinchonidine 1.24, no quinidine, cinchonine .23, amorphous alkaloids .62) is fairly representative. *Ledger* bark from the South Wynaad, yielding 8.41 of quinine, was an average sample of shavings taken from twenty-one trees of five and a half years old; the amount of quinine is equivalent to 11.31 per cent. of the crystallised sulphate; this is one of the highest results obtained in South India.

In this paper was also reported the examination of a tree

other substances calculated. In all cases the ash of the whole substance was determined as well as the ash of the insoluble residue.

The test for the presence of aniline carmine consists in dyeing a piece of white woollen cloth in the ammoniacal filtrate and comparing tint of colour produced. If the ash of the whole substance shows the absence of oxide of tin, aniline carmine need not be looked for.

That the carmine of commerce is not what it should be is sufficiently shown by the results embodied in the following table:—

	1	2	3	4	5	6	7	8	9	10
Carmine (colouring matter)	46.1	69.2	34.1	65.7	60.8	69.5	26.1	72.0	18.4	67.5
Combined alumina and lime	8.0	9.8	11.4	12.0	9.0	7.0	0.4	8.1	4.4	10.0
Matter insoluble in ammonia—										
Organic	21.8	2.5	18.5	—	9.8	—	—	8.0	52.4	9.5
Ash	2.0	2.4	34.0	Trace	0.2	Trace	14.6	1.9	3.6	Trace
Vermilion	—	—	—	—	—	—	50.4	—	—	—
Moisture	22.1	16.1	2.0	22.3	20.2	23.5	8.5	10.0	21.2	13.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

of *Cinchona succirubra* to discover the distribution of alkaloids in its various parts. The tree was twenty-three years old and 31 feet high; it had grown in an exposed situation, and had never been barked or mossed. The whole yielded of dry bark 27 lbs. 14 oz.:—Root, 2 lbs. 8 oz.; stem, 20 lbs. 14 oz.; branch, 3 lbs. 2 oz.; twig, 1 lb. 6 oz.; dried leaves, 2 lbs.

The root bark contained 5.30 per cent. of total alkaloids, the bark of the stem below ground 4.21 per cent., while most other portions of the stem bark yielded under 4 per cent. The leaves only yielded .70 per cent.

Other experiments seemed to show that shade was very favourable to the development of quinine and cinchonidine.

From a short series of experiments on mossing old trees, Mr. Hooper thinks that generally old and original trees if of vigorous growth may still be improved by the mossing system.

The PRESIDENT said he regretted that it had been necessary to merely read an abstract of the paper, for it was a most interesting one throughout, and would amply repay very careful study.

CARMINE.

By M. Dechan, F.C.S.

AFTER describing the various processes for the preparation of carmine, the author proceeds to investigate its composition, and comes to the conclusion that carmine is not a true chemical compound, but a mixture of several compounds. Experiments, instituted for the purpose of determining whether carmine could be prepared without the use of alum or tin spirits, have very clearly established the fact that one of the bases, aluminium or tin, is necessary for its production.

The composition of carmine is variable, and this, the author considers, is due to the fact that the union between the alumina and colouring matter is of a physico-chemical nature, and that, consequently, carmine need not be expected to possess a constant chemical composition.

The following substances are mentioned as likely to be found in commercial carmine:—Vermilion, chrome red, aluminous or starchy matters, aniline carmine, and uncombined alumina and lime.

The method adopted in the examination of ten samples, the results of which will be found in the appended table, was as follows:—The quantity taken for analysis was 0.2 gramme. This was digested in dilute ammonia, with frequent stirring, for twenty minutes, then poured on a tared filter and washed with ammonia until all traces of carmine had disappeared. The filter was dried at 100° C., and weighed, and the percentage of matter insoluble in ammonia calculated. The residue on the filter was now washed with dilute hydrochloric acid and distilled water, again dried and weighed. In the absence of chrome red the loss in weight was calculated as uncombined alumina and lime. The substance left on the filter after washing with hydrochloric acid was ignited, and the loss calculated as aluminous and starchy matters. If vermilion was present the mercury was determined by a combustion analysis, and the proportion of sulphide to the

FERRUM TARTARATUM.

By R. Wright, Pharmaceutical Chemist.

A REPORT on ammonio-citrate of iron was communicated by the author to an evening meeting of the Pharmaceutical Society on March 4, 1885. Since that time he has made some experiments on ferrum tartaratum, the results of which are embodied in the present paper.

The author first reviews the processes official in the different Pharmacopœias for its preparation. The rationale of each is the same, consisting in the dissolving of freshly-precipitated hydrated peroxide of iron in solution of acid tartrate of potassium, filtering, evaporating, and scaling. The only notable deviation from the general rule occurs in the last edition of the U.S. Pharmacopœia, where the amount of peroxide ordered is not sufficient to saturate the acid tartrate of potassium; and hence, after the solution of the salt has been made, a little ammonia is added to form a neutral salt. The amount of hydrated peroxide employed in the different Pharmacopœias varies between the limits of 34.4 and 57.5 (calculated as ferric oxide, F_2O_3) to 100 parts acid potassium tartrate.

The author gives the results of an examination of commercial specimens. The process employed for the estimation of potassium and iron was as follows:—From 4 to 6 grammes of the scale was incinerated in a lightly-covered crucible till all organic matter had been burnt off. The residue was allowed to cool. It was then placed on a filter and treated with distilled water till the washings ceased to have an alkaline reaction. The K_2CO_3 in the filtrate was then estimated by means of a semi-normal solution of oxalic acid. The residue was dried in a water-oven and again incinerated. On cooling, the whole was weighed, and the weight of crucible and filter ash subtracted from the total weight. This gave the amount of residual oxide, from which, by a simple equation, the percentage amount of oxide in the sample was calculated.

The following table shows the results of the analyses:—

No.	Percentage Amount, K_2CO_3	Percentage Amount, Residual Oxides	Ammonia	Ferrous Salts	Sulphates
1	22.9	33.1	Traces	Present	Present
2	Traces	32.7	Abundant	Present	Present
3	12.9	33.0	Present	Present	Present
4	6.6	34.1	Present	Present	Present
5	26.0	25.1	Absent	Present	Present
6	Traces	30.1	Present	Present	Present
7	20.5	33.3	Traces	Present	Traces
8	19.4	30.0	Absent	Absent	Absent

The conclusions drawn from the results of the analyses are that commercial samples of ferrum tartaratum contain a larger proportion of iron than is officially required; that sufficient care is not exercised by manufacturers to free the

hydrated peroxide employed from the ammonium sulphate produced in its preparation; and that in the process of manufacture the limits of temperature laid down in the Pharmacopœia (140° F.) are exceeded, leading to partial reduction of the ferric to ferrous salt.

In conclusion, the author calls attention to the Pharmacopœial statement that if a portion of the scale be incinerated, the residue washed with distilled water and again incinerated, peroxide of iron remains. He states that every residue obtained by him has contained both ferrous and ferric oxides; a portion, probably, as magnetic oxide. He claims, therefore, that partial reduction takes place on incineration, and supports his statement by a quotation from the 1864 edition of the British Pharmacopœia, where, in estimating the iron as ferric oxide, the residue is directed to be dissolved in hydrochloric acid, and the solution to be digested with nitric acid and precipitated by ammonia.

NOTE ON THE OCCURRENCE OF HYDROCYANIC ACID AS A FERMENTATION PRODUCT OF LINSEED MEAL.

By W. O. Senior, F.C.S.

THE author referred to a notice by A. Jorissen in the *Bull. Acad. Roy. Belg.*, that "a mixture of linseed meal and warm water, when kept at a temperature of 25° C., and then distilled, yields a distillate containing hydrocyanic acid," and had investigated the subject.

Three samples of linseed meal were procured from different chemists, treated with water, kept for three days in open beakers at a temperature a little above 25° C., and then, having turned sour, a little tartaric acid added, and distilled.

The distillate was tested, and, in each case, reactions were given—showing beyond doubt that hydrocyanic acid was produced.

Commercial linseed meal, however, is by no means a pure commodity, and the question occurred whether the formation of the hydrocyanic acid was due to linseed itself, or was occasioned by foreign seeds existing as impurities.

Testing, however, some pure crushed linseed, prepared on purpose by Mr. Corder, of Norwich, the presence of hydrocyanic acid was again indicated, but to a much less extent than before.

To make quite sure that nothing but pure meal was being experimented with, a quantity of linseed was procured, and carefully picked over by hand, sowed by seed, and not only the foreign seeds, but all bruised or discoloured linseeds were carefully excluded, and only the pure clean seeds kept.

These were lightly crushed, and immediately treated with water in a flask and, after forty-eight hours, distilled. Again, the presence of prussic acid in the distillate was unmistakably proved. Moreover it was found that, on similarly treating the foreign seeds, the distillate did not contain even a trace of hydrocyanic acid.

The investigation was continued, in order to ascertain the conditions under which linseed meal yields hydrocyanic acid most abundantly, and the conclusion was arrived at that both time, alkalinity, and exposure to the air have a considerable bearing on the amount of acid produced; time affecting the result chiefly within the first twenty-four hours, after that only to a small extent, whilst the maximum quantity is obtained when all the three conditions are united.

NOTES ON THE ESTIMATION AND SEPARATION OF MAGNESIUM AND CALCIUM.

By Alfred and Louis Siebold.

THE authors have critically examined the volumetric process for the estimation of magnesium, published some time ago by Stolba ("Year-book of Pharmacy," 1877, 49), and report that it is capable of giving results of the highest accuracy. They find it more exact even than the gravimetric method, and much more expeditious. It has the advantage, moreover, of being applicable in the presence of calcium, without the necessity of first removing the latter. By the aid of this process they have worked out a handy method for the estimation of both calcium and magnesium when occurring together, the main features of which are as follows:—The calcium is thrown down by ammonium oxalate and ammonia as usual, and then the magnesium by means of sodium phosphate, without first removing the calcium precipitate. Two

separate portions of the solution containing both metals having been treated in this way, the precipitates are collected on filters, washed with water containing ammonia, and subsequently with alcohol, until the filtrates cease to be alkaline. The magnesium is then estimated in one of the precipitates by titration with decinormal hydrochloric acid, according to Stolba's method, while the other precipitate is strongly ignited, so as to obtain its magnesium as pyrophosphate, and its calcium as oxide, and then weighed. The magnesium determined in the other precipitate is calculated for pyrophosphate, and the proportion of calcium then found by subtraction from the weight of the ignited precipitate. The authors quote a number of experiments to show the accuracy of this process.

A NOTE ON "SOME INSOLUBLE PHOSPHATES."

By Joseph F. Burnett, F.C.S.

THE reaction produced when an insoluble phosphate dissolves up in an acid, forming a soluble acid phosphate, or superphosphate, is well known, as, for instance, that represented by this equation: $\text{Ca}_3\text{2PO}_4 + 4\text{HCl} = \text{Ca}(\text{H}_2\text{PO}_4)_2 + 2\text{CaCl}_2$. But when the acid employed forms an insoluble compound with the metal in the phosphate, the action is somewhat different. Concerning some of these reactions, the statements are conflicting, and with a view to confirming or disproving them certain experiments were undertaken, which were described at length. First, a sample of "pure" barium chloride (crystallised) was converted into phosphate by pouring a solution into a solution of ordinary sodium phosphate rendered alkaline by ammonia. Contrary to expectation the precipitate produced, when dried and weighed, corresponded to mono-baric phosphate, BaHPO_4 , instead of the tri-phosphate, $\text{Ba}_3\text{2PO}_4$. The effect of sulphuric acid, strong and cold, then dilute and cold, then dilute and boiling, was tried upon it. From all these experiments the author concluded that the action of sulphuric acid is to displace the whole of the phosphoric radical from barium phosphate, and not to form superphosphate. Next, the effect of hydrochloric acid on silver phosphate was investigated. A pure nitrate was specially made and converted into phosphate. Of this .779 grm. was mixed with an excess of strong hydrochloric acid (1.16), and set aside until next day, then diluted, filtered, and the chloride washed, dried, ignited, and weighed; the filter was burnt, the metallic silver in it weighed, the latter calculated out to chloride and added to previous result. By this means .8015 silver chloride was obtained (.800 theory). Next .659 silver phosphate, with cold dilute (B.P.) acid, gave .6765 chloride (.6770 theory), and the filtrate yielded .172 magnesic pyrophosphate (.174 theory). Lastly, .867 phosphate, on being boiled for a few minutes with dilute acid, yielded .8925 chloride (theory, .890) and .227 magnesio pyrophosphate (theory, .229). In these instances, therefore, the action is represented by the equation, $\text{Ag}_3\text{PO}_4 + 3\text{HCl} = 3\text{AgCl} + \text{H}_3\text{PO}_4$, corresponding to the case of sulphuric acid on baric phosphate.

SPURIOUS CUBEBS.

By W. Elborne and H. Wilson.

IT will be remembered that Mr. Buxton Shillitoe lately described in the *Lancet* the bad effects produced by the administration of some cubebs adulterated with an obnoxious piperaceous fruit which Mr. Holmes and Mr. Kirkby have believed to be *Piper crassipes*. The authors of this paper have aimed to carry the subject a stage further by more closely examining the nature of these fruits of *Piper crassipes*.

As the result of a number of experiments they conclude that the spurious cubebs under investigation are free from tannin, and contain essential oil, resin, and a very bitter glucoside, but to which of the two latter the deleterious effects recorded may be attributed still remains a subject for physiological experiment.

THE PRESIDENT next in suitable terms presented a set of volumes from the Bell and Hills fund to the Aberdeen and North of Scotland Chemists and Druggists' Association, for which gift Mr. Coutts, the librarian of the Association, thanked the trustees of the fund.

Mr. BARCLAY then invited the Conference to hold its next

annual meeting at Birmingham. Some humorous allusion in Mr. Barclay's speech to a suggestion that the Conference should again go to Ireland, recommending Birmingham as preferable for its respectable and conservative character, brought up Mr. Payne, Belfast, and a political discussion seemed imminent, but it was nipped in the bud by the President. The acceptance of Birmingham was proposed by Mr. PLOWMAN, seconded by Mr. UMNEY, supported by Mr. FRASER, and carried unanimously.

The following Executive was then elected for the ensuing year:—

President.—Thomas Greenish, F.C.S., F.R.M.S., London.

Vice-Presidents.—F. Baden Bengier, F.C.S., Manchester; M. Carteighe, F.I.C., F.C.S., London; C. Ekin, F.C.S., London; T. Barclay, Birmingham.

Treasurer.—C. Umney, F.I.C., F.C.S., London.

Honorary General Secretaries.—S. Plowman, F.I.C., M.R.C.S., London; J. C. Thresh, D.Sc., F.C.S., Buxton.

Other Members of Executive Committee.—S. R. Atkins, Salisbury; T. Maben, Hawick; J. E. Brunker, M.A., Dublin; W. Hills, F.C.S., London; D. B. Dott, F.R.S.E., Edinburgh; J. P. Kay, Aberdeen; W. A. H. Naylor, F.C.S., London; G. E. Perry, Birmingham; W. H. Symons, F.C.S., F.R.M.S., London.

Local Secretary.—Charles Thompson, Birmingham.

Auditors.—J. Paterson, Aberdeen; C. J. Arblaster, Birmingham.

A vote of thanks to the Local Committee, proposed by Mr. Gilmour and seconded by Mr. Martindale, was responded to by Mr. Strachan, the local secretary, and by Mr. Kay.

Votes of thanks were also passed to the Young Men's Christian Institute for the use of their rooms, to various firms for permission to visit their works, and to the President. The latter, in responding, asked for a vote of thanks to the honorary general secretaries, Mr. Plowman and Dr. Thresh, which was heartily carried, and responded to by Mr. Plowman.

The annual dinner of the Aberdeen and North of Scotland Society of Chemists and Druggists, to which the members of the Conference were kindly invited, was held at the Palace Hotel on Tuesday evening, September 8. The attendance was very large. Mr. David Ritchie, the President of the Society, occupied the chair. Dr. and Major F. M. Moir responded in a very humorous and discursive speech. The chairman, who was commendably brief, gave the "British Pharmaceutical Conference," to which Mr. J. B. Stephenson responded, insisting, with an energy which almost suggested a doubt, that the Conference was as much in the path of duty in a social gathering as in the more austere work of the day. Mr. Sim then gave the "Pharmaceutical Society of Great Britain" and coupled the toast with the names of Mr. J. Williams and Mr. Nesbit. The "Aberdeen and North of Scotland Society of Chemists and Druggists" came next, and was given by Mr. J. B. Stephenson, who remarked in eulogistic terms upon the courteous reception that had been accorded to the Conference, and to the hospitality that the members had experienced that evening. In replying to the toast, the chairman gave a *résumé* of the history of the Society, remarking that it was established in 1839, before the Pharmaceutical Society of Great Britain was in existence, and that having passed through its years of infancy and struggle, it had now attained to a strong and healthy position; and also that in Aberdeen there was not a single chemist who did not belong to the Society. He also referred to the remarks the secretary had made in the report about the expenditure of local committees. He wished it to be understood that in the present case the Conference was not being entertained by a local committee, but by an old established institution, and that therefore the remarks of the secretary did not apply to them, and also that the expenditure on the present occasion ought not to be regarded as a precedent for local committees elsewhere to act upon. The remaining toasts included the "Hon. General Secretaries," proposed by Mr. J. P. Kay, and responded to by Mr. Plowman and Dr. Thresh; the "Medical Profession," proposed by Mr. Martindale, and replied to by Dr. Gordon; the "Chemical Society," proposed by Mr. G. E. Broomhead, and responded to by Mr. C. Umney and Mr. J. Moss; the "City and Trade of Aberdeen," by Mr. J. Clark, and replied to by Baillie Paterson; the "Ladies," the "Press," and the "Chairman." Songs were interjected, and the proceedings concluded at a late hour with "Auld Lang Syne."

THE PRESIDENT.

MR. J. B. STEPHENSON, the President of the late Pharmaceutical Conference, is one of the best known of Scotch pharmacists. He was born at Duns, where his father was a medical man. He served his apprenticeship with Duncan, Flockhart & Powell, of Leith, and was afterwards an assistant with Duncan & Flockhart, of Edinburgh. Afterwards he joined Mr. James Robertson, 35 George Street, Edinburgh, as partner, and subsequently carried on business on his own account in George Street.

He went through the University course, so far as it pertains to pharmacy, Gregory and Christison being his teachers. While partner with Robertson he had a good deal to do in the practical work for the B.P., 1864, Mr. Robertson, being a member of the Scotch Committee. The Edinburgh Price-list is in a great measure due to him. He assisted Dr. Scoresby Jackson with his Note-book of *Materia Medica*, which assistance is acknowledged in the preface. It is understood that the *rationale* which has rendered that text-book the backbone for Scotch students was in a great measure Mr. Stephenson's work. He has contributed several pharmaceutical papers to the North British branch of the Pharmaceutical Society, of which he was president for five years. He has been chairman of the Board of Examiners for Scotland for eight years, and is the Pharmaceutical Society's honorary treasurer in Scotland. He is an accomplished scholar, and writes and speaks well, and enjoys the respect and confidence of his fellow-citizens to a high degree. Mr. Stephenson is a strong champion for the defence against the English attack on Scottish pharmaceutical rights and privileges. It was unfortunate for on-lookers that, by a curious combination of coincidences, all the supporters of the English views were "unavoidably prevented" attending the Aberdeen Conference. Had it been otherwise we might have been able to gather some intelligent conception of the true inwardness of the controversy.

EXCURSION TO BRAEMAR.

ON Thursday, the 10th, the members of the Conference, with the local committee and friends, numbering in all about 170, made an excursion up Deeside. A special train left Aberdeen at 8.35 for Ballater, and, *en route*, views were obtained of the Grampians, the remains of an old Pictish camp at Lumphanan, a district crowded with romance, and closely associated with the tragic incidents of "Macbeth." The old castle and deer-forests, held by the Marquis of Huntly, on the north, and the handsome mansion and extensive forests in the possession of Mr. W. Cunliffe Brooks, M.P., on the south, were also seen, whilst further westwards, at Dinnet, Loch Kinnord, with its extensive beds of kieselghur used in the manufacture of dynamite, was observed; and, in due course, the picturesque village of Ballater, the terminus of the railway, was reached. Here the train was exchanged for coaches, and a drive of about 16 miles to Braemar followed. From commencement to end the journey was through mountain scenery of the most enchanting character, beginning with the famous pass of Ballater, passing Balmoral Castle, Invercauld, and the forest of Ballochbuie. Arrived at the old castle of Mar, a seat of the Earl of Fife, the whole company was grouped and photographed by Mr. Geering, of Aberdeen. The journey was then resumed to Braemar, where the party were entertained at luncheon by the local committee. The only toasts given were those of "The Queen" and "The Royal Family." During luncheon Mr. Plowman read a cablegram of hearty greeting from the American Pharmaceutical Association, sitting at Pittsburg, which had been received on the previous day after the Conference had broken up. The telegram was received with loud cheers, and Mr. Plowman was instructed to send a cablegram in reply. After luncheon the party returned by the same route, reaching Aberdeen at 7.30. The whole proceedings were carried out in a most admirable manner. As no announcement was made of the fact, we are asked to intimate that copies of the photograph taken at the castle of Mar can be obtained from Mr. Geering, Union Place, Aberdeen.

The following signed the attendance-book:—

ABERDEEN—

Adamson, W. S.
Broomhead, G. E.
Coutts, C.
Cruickshank, J. P.
Davidson, C.
Giles, W.
Glover, W. R.
Gordon, Dr.
Gordon, W.
Johnston, J.
Kay, J. P.
Mortimer, D. A.
Paterson, A.
Paterson, Balie
Presslie, Dr.
Reid, W.
Ritchie, D.
Sangster, J.
Shepherd, G. T.
Sim, J.
Spence, J.
Strachan, A.
Strachan, J. E.
Whyte, J.

ABOYNE—

Petrie, J. J.

ALLOA—

Borthwick, R.

ARBROATH—

Burn, D. Hartley

AUCHENBLAE—

Bertie, J.

BANCHORY—

Lunan, A.

BARNESLEY—

Lister, T.

BELFAST—

Payne, J. C. C.

BIRMINGHAM—

Alcock, F. H.
Barclay, T.
Robinson, A. E.

BLACKBURN—

Farnworth, W.
Walter, W.

BRIGHTON—

Savage, W. D.

BROUGHTY FERRY—

Park, W.

CHESTER—

Baxter, G.

COLERAINE—

Baxter, W. A.

COVENTRY—

Jones, H. W.

DUFFTOWN

Sangster, W.

DUNDEE—

Anderson, A. B.
Ferrier, D. H.
Kerr, C.
Mackay, D.
Russell, J.

DUNFERMLINE—

Scath, A.

ECCLES—

Howie, W. L.

EDINBURGH—

Dott, D. B.
Evison, W.
Gilmore, W.
Hutcheson, W. (Bonnyrigg)
Laird, G. H.
Macadam, Stevenson
MacEwan, P.
Pinkerton, W.
Stephenson, J. B.

ELGIN—

Young, J.

ELLON—

McGregor, G.

ELMSDALE—

Paterson, J.

FORFAR—

Simpson, A. H.

FRASERBURGH—

Burnett, R.

GLASGOW—

Frazer, D.
Illingworth, G. S.
Kinniamont, A.
Nicol, J.

GLOUCESTER—

Ward, Jas.

HASTINGS—

Bell, Jas.

HELENSBURGH—

Harvie, G.
McMurray, J.

INDIA—

Watson, G. A.

INVERNESS—

Galloway, G. Ross

HONG KONG—

Woolnough, H. A.

HURSTPIERPOINT—

Mitton, Miss B.
Mitton, Miss Flora

KEITH—

Beverley G.
Dawson, J. H.

KILMARNOCK—

Borland, J.

LEEDS—

Fairlie, T.
Jefferson, P.
Ward, G.

LEICESTER—

Burford, S. F.
Clark, J. W.
St. Dalmas, A.
Forth, J. C.

LIVERPOOL—

Abraham, T. F.
Conroy, T. M.
Fraser, A.
Richardson, R. A.

LONDON—

Barnes, J. B.
Bindloss, G. F.
Bremridge, R.
Chapman, J. J.
Clarke, F.

LONDON—cont.

Davies, R. H.
Francis, F. J.
Fryer, C. H.
Glazier, W. H.
MacDonald, A.
Maitland, P. C.
Martindale, W.
Mathews, J. H.
Moss, J.
Passmore, F.
Pettinger, E.
Plowman, S.
Princep, P.
Robinson, R. A.
Symons, W. H.
Umney, C.
Umney, J.
Warren, W.
Weld, C. E.
Williams, J.
Wootton, A. C.
Wright, T. R.
Yates, R.

MACDUFF—

Stephen, J. W.

MANCHESTER—

Angell, J.
Jackson, A. H.
Thomson, W.

NEW BLYTH—

Gibbs, G. S.

PERTH—

Peebles, J. A.

PORTOBELLO—

Nesbit, J.

SETTLE—

Shepherd, J. W.

SHEFFIELD—

Allen, A. H.
Fox, A. R.
Ward, W.

SOUTHPORT—

Thorp, J.

STONEHAVEN—

Bowie, D. G.

SWANSEA—

Brooks, E. T.
Grose, N. M.
Hughes, J.

TURRIFF—

Fewtrell, J.

TYNEMOUTH—

Atkinson, J.

WALTON—

James, B.

WEYMOUTH—

Groves, T. B.

WIGAN—

Johnson, T.

WOOLWICH—

Grisbrook, S.

YORK—

Clarke, J.

THE MAJOR EXAMINATION.

"IS it worth while to attempt to pass the Major?"

Judging from the value placed upon Major assistants by some chemists, and the opinions expressed lately in *THE CHEMIST AND DRUGGIST*, it apparently is not. And it would perhaps be difficult to prove that the privilege of being called a "pharmaceutical chemist" is worth much from a monetary point of view. But the feeling of having passed the highest examination, and the increased knowledge obtained in working for it, in my opinion quite settle the question.

Having thus come to the conclusion that the attempt was worth making, I presented myself at ten o'clock at Bloomsbury Square for the practical part of the examination. Dr. Thresh was the appointed superintendent of the examination for the day. He first told us that anything we required he would be pleased to give us, and in any difficulty we were to come to him, and not mention it to our companions.

My work, for which six hours was allowed, consisted of (1) a separation of salts, in which I had to name the salts; (2) three simple definite chemical compounds; (3) an ointment in which I had to find the active ingredient; and (4) a sample of vinegar, ascertain its specific gravity, the impurities, if any, and the percentage of acetic acid which it contained.

I began with the mixture of salts, and, after working carefully, came to the conclusion that it consisted of carbonate of lead and carbonate of bismuth. For some time I was doubtful about the acids, and was specially careful in looking for nitrates, which I quite expected to find present. Before I left it, however, I was fairly sure that carbonates were the only acids present.

The simple salts were all straightforward—(1) chrome alum, (2) sulphate of quinine, (3) benzoate of ammonia.

The ointment, at the first glance, seemed rather awkward, but, after a short time, I thought of a process which, though not very elegant, was quite satisfactory, and I found mercuric chloride was the active ingredient.

At this point sandwiches were brought in, and were duly appreciated by most of us.

In the sample of vinegar I found sulphates and sulphites present as impurities, and, of course, had no difficulty with the specific gravity or the percentage of acetic acid. I asked the examiner for phenol thalein to use as an indicator, but he quietly informed me that I should be able to work quite accurately enough with litmus, and that students were only expected to work in the examination as they would in the laboratory.

I rather expected to be asked some awkward questions on phenol thalein in the theoretical work next day, but, fortunately, did not have the same examiner.

When I had written out my report, as I still had about twenty minutes to spare, I made another attempt to find nitrates in my separation, but, fortunately [for myself, gave it up as hopeless.

The theoretical work of the second day was what I most dreaded, and as I entered the examination-room I looked forward to a bad time.

Materia medica was the first subject, and that occupied about half an hour. Was shown a piece of white hellebore; was asked what it was, and what was its active principle. Then, what is veratria; is it commercially obtained from white hellebore? What is digitalinum obtained from; what is it? What is the difference between a neutral principle and an alkaloid? What is an essential oil? These two last-named questions I found rather awkward to answer, and am doubtful whether the examiner was much wiser for my explanation.

I was next required to give the composition of oil of cinnamon and of oil of cummin, and to give formulæ for cymene, cuninol, camphol, thymol, and menthol. I had learnt those up well, so was able to answer satisfactorily. What is conia obtained from, and how is it obtained? I said by taking up an extract with acidulated water, adding caustic potash, and then dissolving out with ether, which, I had been told, was an improved process. This rather pleased the examiner, and he asked me what was the objection to "distillation" with caustic potash.

Had I ever done any bark estimation? I replied I had, by both the B.P. and the "De Vrij" processes. I was then asked what were the objections to the B.P. process, and to describe fully the De Vrij. The examiner then gave me his idea of it, and suggested various improvements.

This finished materia medica, and, after a short interval, I went to botany, to Mr. Southall. Time, about half an hour.

Was shown a plant, asked the natural order, which was Liliaceæ, and asked to describe the flower. Had to recognise plants in the following orders:—Polygonaceæ, Compositæ, and give sub orders; Umbellifera, Leguminosæ, give sub orders; Euphorbiaceæ, and describe a flower in Euphorbiaceæ. Was then asked:—What is a cell? What is it composed of? What is cell-wall composed of? What is protoplasm? What are the fibro-vascular bundles? Is there any cambium in them? Where is the cambium situated? Is there any cambium in monocotyledons? How do monocotyledons grow? What is sap? What is taken up from the soil? What is chlorophyll; of what is it composed, and what is its use? Where is starch formed. We then returned to the flowers, and I was asked to describe one of the Umbellifera, and explain what the stylopodium was, and where situated. Shortly after I was told to sit down.

Then came chemistry, with the President as examiner; this occupied about an hour.

The first question was, What is organic chemistry? Then, Have you ever done an ultimate organic analysis? Fortunately, I was able to answer in the affirmative, and was then asked to describe fully the whole process from beginning to end, giving all necessary precautions.

This took some time, and gave me a good start. My questions then were, How is nitrogen estimated? How would chlorine be estimated in an organic compound, say, in chloral hydrate? How would a volatile liquid be estimated? Had I ever taken a vapour density? I said that I had never done one myself, but had seen it done on the lecture-table. That was quite near enough, and I was asked to describe the process. How should I make chloroform, ether, marsh-gas, and had I made them all? What is marsh-gas found in? Is it the illuminating constituent of coal-gas? What other gases are found in coal-gas? Describe all the products of the distillation of coal-tar? What is naphthalene used for? Write down the formulæ for carbolic and cresylic acids, and

show the analogy between them. Is carbolic acid an acid or an alcohol? (a good try to catch). Why is it not a true alcohol? How should I test for small quantities of carbolic acid? How is zinc ethyl made, also ethyl iodide, and write equations. How is ethyl itself made? Describe fully the making of candles and soap. (Here we had an interesting conversation on Pear's soap and transparent soap in general.) What is specific heat and latent heat? In distilling the same quantity of rectified spirit and water separately, would they both require the same amount of cold water to condense them, and give reason for answer. How could I account for things having colour? If a blue light were passed on to a red coat what colour is seen? And other questions, many of which I have forgotten.

Chemistry finished up my subjects, and on the following day I was able to call myself

PHARMACEUTICAL CHEMIST.

THE CHEMISTS AND DRUGGISTS' TRADE ASSOCIATION.

MEETING OF THE EXECUTIVE COMMITTEE.

BIRMINGHAM, August 21.

MR. W. G. CROSS (Shrewsbury), President, in the chair.

The general sub-committee presented a report. The defence of Mr. Joseph Burton, London, under the Weights and Measures Act, and of Mr. F. Wheeler, Guildford, under the Arsenic Act, was first referred to. Both cases have been reported in THE CHEMIST AND DRUGGIST. The Committee had considered the advisability of steps being taken by the Association to endeavour to reverse the decision of the magistrates on the first of the summonses against Mr. Wheeler, but after considerable discussion it was unanimously decided to take no further action in the matter.

The report further stated that in June last a writ had been issued in the High Court of Justice by the Maltine Company against Messrs. Rogerson & Son, Bradford, for having infringed a trade-mark of the company in selling a preparation under the title of "Diamaltina." Before communicating with the Association, defendants' solicitors had undertaken that defendants should discontinue the sale of the preparation under the name "Diamaltina." The Committee, having carefully considered the case, and being advised by the solicitor that, in his opinion, no infringement of the plaintiff company's trade-mark had taken place by the sale of this preparation by the defendants, instructed the solicitor to accept service of the writ. Subsequently, plaintiffs offered to withdraw the action, provided defendants would carry out certain conditions, pay the costs, &c. This offer was refused, and the action had since been withdrawn, the plaintiff company having abandoned all claims to account, destruction of labels, and costs, &c., satisfying themselves with the promise of the defendants not to make use of the word "Diamaltina" in future, which promise was made before the Association took the matter in hand.

The report was received and adopted.

TRADE-MARKS.

The report of the Sub-committee on Trade-marks gave details of considerable correspondence with the Comptroller in reference to the undermentioned marks:—

Robert Free, The Elms, Priestley, Essex—Malt extract—Class 3. Words, "The Standard Malt Extract."

James Voller, 21 Meyrick Road, Battersea—Pills—Class 3. Words, "Gout Pills," with representation of applicant's signature above.

Selah Reeve van Duzer, 114 & 116 Southampton Row, Bloomsbury—Preparations for Skin, Toilet Articles, and Perfumery—Class 48. Words, "Bridal Bouquet Bloom."

The Committee had asked the Comptroller to require a disclaimer in each case of the words in italics, as being titles common to the drug trade. The Registrar, in reply, consented to ask Mr. Free to enter a disclaimer of the words "Malt Extract" upon his application. In the mark No. 44,082 the essential particular is the name of "Voller" in the possessive case, and the Comptroller would not, with his present information, require the applicant to disclaim.

such ordinary words as "Gout Pills." As regards the mark No. 44,588, which consisted only of the words in respect to which a disclaimer was demanded, the Association must proceed by notice of opposition. The Committee had decided not to proceed further with the opposition to the "Gout Pills" mark. Further correspondence had ensued in reference to the "Bridal Bouquet" mark, and it was shown that the name of Bridal Bouquet appeared on Messrs. Atkinson's wholesale list. But the Registrar said his office had no evidence that the item in Messrs. Atkinson's list did not refer to the goods of Mr. van Duzer. Under these circumstances the only course was to leave the Association to communicate with Mr. van Duzer, announcing its intention to oppose.

Notice of opposition had also been filed by the Association on the following marks:—

J. F. White, 17 Vicar Lane, Leeds—Medicine—Class 3. Label, containing words, "Dr. White's *Tonic and Nervine Essence*." No. 43,250.

J. F. White, 17 Vicar Lane, Leeds—Medicine—Class 3. Label, containing words, "Dr. White's *Wild Cherry Balsam*." No. 43,251.

J. F. White, 17 Vicar Lane, Leeds—Medicine—Class 3. Label, containing words, "Dr. White's *Composition Essence*." No. 43,252.

Paterson, Brothers & Co., 250 Buchanan Street, Glasgow—Substances used as food—Class 42. Label, containing words, "Paterson's *Extract of Malt*." No. 43,335.

Edward Frederick Langdale, 72 and 73 Hatton Garden—Preparation for human hair—Class 48. Label, containing words "Concentrated *Extract of Limes and Glycerine*." No. 41,623.

Robert Doran, 140 City Road, Glasgow—Medicines—Class 3. Words, "The *Glasgow Medical Hall*."

The Photographic Artists' Co-operative Supply Association Limited, 43 Charterhouse Square, London, E.C.—Chemical substances used in photography—Class 1. Words, "The *Tranium*."

J. F. White, 17 Vicar Lane, Leeds—Medicinal preparations—Class 3. Words, "*Cherry Balsam*."

Robert Morrison, The First Avenue Hotel, London, W.C.—Preparations for the moustache—Class 48. Word, "*Mezereon*."

Since the notices had been filed, applicants for the extract of Malt and Limes of Glycerine marks had filed a disclaimer at the Trade-marks Office to any right to the exclusive use of those words, and paid to the Association 1*l.* to cover cost of stamp used in filing notice of opposition. Applicants for the Tonic and Nervine Essence and Composition Essence marks had also offered to disclaim any right to the exclusive use of those words, but refused to refund to the Association the cost of the stamp used in filing notice of opposition, therefore the notice of opposition still stood.

Within the last few days counter notices of opposition had been received from the Trade-marks Office, filed by applicants for the "Glasgow Medical Hall" and "Cherry Balsam" marks, with a request from the Comptroller that a bond in each case for 200*l.* be provided by the Association.

The SECRETARY said that since the report was drafted he had received a communication from the Trade-marks Office stating that, in consequence of the notice of opposition filed by the Association to the proposed trade-mark, "Condy's Fluid," in plain block type, and no counter statement having been lodged, the application of Messrs. Condy & Mitchell (Limited) was, under section 69 (2) of the Patents, Designs, and Trade Marks Act, 1883, deemed to be abandoned, and had been so noted accordingly.

The report having been adopted, Mr. BARCLAY asked in what way the abandonment of the application for the registration of the "Condy's Fluid" trade-mark affected the trade.

The SOLICITOR said that the term "Condy's Fluid" could now be used by any person on preparations for disinfecting purposes.

Mr. SYMES said: Then it is quite open property to the trade, and they may use the words just as they use the term Gregory's Powder."

The SOLICITOR said that was so.*

The PRESIDENT said they must consider the present position of the Association in reference to trade-marks, more particularly as to the provision of bonds to the Comptroller in cases of opposition, bonds for 400*l.* being now required.

In the course of discussion on this subject the solicitor said he could not tell what the cost of opposition might be. Mr. Parker, Mr. Hampson, and others questioned the prudence of going forward with these cases. Mr. Barclay urged that they would lose their influence at the Trade Marks Office if they abandoned the opposition, and, indeed, must give up looking after trade-marks at all.

Ultimately it was moved by Mr. Barclay and seconded by Mr. Symes:—"That the case having been submitted to counsel, and his opinion being that all the grounds of opposition are valid and will succeed, the executive instructs the solicitor to take all necessary steps to oppose the registration of the "Cherry Balsam" trade-mark, and that the secretary and Mr. Cross be requested to execute the necessary bond; that the treasurer be directed to transfer to their joint account 200*l.* of the funds of the Association to secure repayment of any sum which they, or either of them, may be called upon to pay in respect of the bond, and that the secretary take such measures as he thinks desirable to inform the trade that a guarantee fund must be raised if the work of the Association in connection with trade-marks is to be continued, and that no further bond be given in any future case unless at least 1,000*l.* has been previously paid into such guarantee fund."

The following amendment was proposed by Mr. Hampson and seconded by Mr. Jervis:—"That before the sum of 200*l.* be deposited for defending the action of the Association in connection with the trade-mark cases, a guarantee fund of at least 500*l.* be obtained."

The original motion was carried by 13 to 3.

The secretary was instructed to write to the Comptroller to state that as the applicant for registration of the "Glasgow Medical Hall" mark makes no claim to the separate use of the terms "Glasgow" or "Medical Hall," the Committee withdrew their opposition.

PHARMACY IN AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, VICTORIA, July 22.

AMENDING THE PHARMACY ACT.

SINCE my last letter some excitement has been caused by an attempt on the part of the United Friendly Society's Dispensaries to introduce into Parliament an amended Pharmacy Act. The reason for their so doing is found in the fact that under the present Act there is no recognition of these institutions, and therefore apprentices who have served their apprenticeship in a dispensary are unable to comply with the section requiring them to furnish a statutory declaration that they have served in "an open shop."

During the last nine years some ten persons have been apprenticed to friendly societies' dispensaries, and it is in the interest of these apprentices that the movement has been made to erase the words "open shop" from the existing Act.

A public meeting of chemists and druggists, which was largely attended, was held in the hall of the College of Pharmacy on June 24, when resolutions were unanimously passed to resist the proposed amendments.

Since the meeting a Conference has been held, and the Member of Parliament who was to have moved the amendment has agreed to withdraw it, provided that the Government will introduce a clause making the apprenticeship to a registered pharmaceutical chemist, who is the manager of a dispensary, legal. This the Pharmacy Board have agreed to, and Mr. J. Bosisto, with the consent of the Government, has given notice to introduce an amended Bill. Advantage will also be taken of this opportunity to make some further needed alterations, so that the good to be obtained will more than counterbalance the concessions made.

During the discussion of the amendments to the Pharmacy Act an attempt was made to do away with the legal age of

* We think it right to state that Messrs. Condy & Mitchell (Limited) do not admit this presumption that the title is public property, and we understand that they will prosecute any infringement of their title. They state further that their application for the registration of a trade-mark was abortive through an informality, and will be renewed.

twenty-one years. Instances were given of students who had passed through all the required course of instruction and completed their term of apprenticeship some considerable time before they arrive at that age, but who, being under twenty-one years of age, were unable to present themselves for their final examination.

The Pharmacy Board opposed any alteration in this direction, and were strongly supported by the trade generally, and I do not think there is any prospect of it being carried.

The unusually severe winter which we are now experiencing has made business in Victoria dull, but the prospects of the coming season are very good.

THE INTERCOLONIAL CONFERENCE.

There is little or nothing new to report in reference to the proposed Intercolonial Pharmaceutical Conference to be held in Sydney in September next. The President of the Pharmacy Board, with the President and honorary secretary of the Pharmaceutical Society, will probably be the delegates who will attend from Victoria.

A PHARMACY BILL FOR SOUTH AUSTRALIA.

The pharmacists of South Australia are persevering in their attempt to obtain legislation on pharmacy. Scarcely a day passes without some letter on the subject appearing in the daily papers, and now that they are fairly roused to the importance of the object we may hope they will carry it to a successful issue. Of course there are numbers of storekeepers and other traders who have for years past been dabbling in the drug trade, and who are now protesting against the legislation in what they consider the general interests of the trade.

A meeting of chemists is to be held in Adelaide this week, the result of which you shall have in my next.

NEW ZEALAND PHARMACY.

I am sorry to report that anything but a satisfactory state of things exists in New Zealand. A gentleman who has always taken a great interest in pharmacy in that colony writes to inform me that the Pharmaceutical Society of New Zealand no longer exists, and that it is exceedingly probable that there will be no representative of that colony at the proposed Pharmaceutical Conference. It is greatly to be regretted, as after much patient labour to establish the Society, it should now, through lack of interest, die out.

INDIGENOUS BOTANY.

A most beautiful educational collection of plants, prepared for the public institutions of the colony by the Government botanist, Baron Sir F. Von Mueller, has recently been presented to the College of Pharmacy by the chief secretary.

Mr. Bosisto, the President for Victoria of the Colonial and Indian Exhibition, is busy perfecting his arrangements, and is meeting with very great encouragement from all quarters. The products of native vegetation will form one of the interesting features of the exhibition.

FROM NEW SOUTH WALES

The ninth annual meeting of the Pharmaceutical Society of New South Wales was held in the Hall of the School of Arts on June 30, when the annual report and balance-sheet were submitted. The report states that steps had been taken to incorporate the Society upon lines similar to that of the parent Society in Great Britain, and that a beginning had been made towards forming a museum. The Treasurer's statement showed the receipts for the year were 3467. 18s., and the expenditure 2867. 12s. 10d. The President (Mr. W. Larmer) read his annual address, which, in addition to dealing with the topics mentioned in the annual report, said:—"Next month a course of lectures will be given by Mr. Quayle upon pharmacy, chemistry, and materia medica; and, considering the high reputation of our lecturer, I think these subjects will be rendered very interesting and instructing, and I should hope they will be well attended by students and others. The report and balance-sheet just read convey the gratifying intelligence that our funds are increasing yearly, as well as our members. Many matters of importance have engaged the attention of your Council. The most important, I may say, have been those relating to the incor-

porating of our Society on the lines of the British Society, and also making arrangements for holding an Intercolonial Conference, to be held here in September next. An Act of Incorporation would put the Society into a legally and officially recognised position, by which it would be enabled more effectually to watch over the vested rights of legally-qualified pharmacists, and be able to more effectually carry out a higher standard of education in pharmaceutical matters. In obtaining an Act of Incorporation a distinction would be made between qualified and unqualified persons, giving titles which the public would recognise, and thus providing to some extent a means of safety in a most important matter of everyday life. The necessary arrangements have been made with our solicitor to carry the Bill through Parliament with all speed."

At the annual meeting of the Pharmaceutical Society of New South Wales, held in Sydney on June 30, Mr. Henry pointed out that in Victoria the Society had assumed the name of "The Pharmaceutical Society of Australasia." They in New South Wales might, he considered, do the same, and more justly so. He considered that this, on the part of Victoria, was not correct, because the Society in Melbourne—of Victoria—could not be the Society of Australasia. He thought some representation should be made to the Victorians on the subject, with the view of finding out how they assumed that name. They in New South Wales should stand upon their own dignity and assume some other title.

PHARMACY IN CANADA.

(FROM OUR OWN CORRESPONDENT.)

PROVINCE OF ONTARIO.

THE semi-annual meeting of the Ontario Pharmaceutical Society was held at Belleville on August 5 and two following days. Mr. N. C. Love occupied the chair.

The first business brought before the Council was the election of officers for the ensuing two years. Mr. Edmund Harvey, of Guelph, was unanimously elected president, and Mr. R. W. Elliot, of Toronto, vice-president; Mr. George Hodgetts was re-elected registrar-treasurer.

In the evening the Murchison Society entertained the Council and visiting pharmacists at a conversazione, in their rooms at Albert College. This was an exceedingly interesting and successful affair, about 200 ladies and gentlemen being present. The chair was taken by Mr. Thomas Wills, President of the Murchison Society. On the platform were Rev. Dr. Dyer, Mr. R. W. Elliott, Rev. A. Campbell, Dr. Jaques, Mr. E. Harvey, and Mr. S. B. Burdett. The following gentlemen read a series of interesting papers, which were highly appreciated by the audience present:—Messrs. Gregor, Mason, Avison, Elliot, W. Saunders, and Professor Shuttleworth.

On August 6, by invitation of the druggists of Belleville, a very agreeable excursion on a pleasure-steamer, *Nellie Cuthbert*, to Deseronto, Glenora, and other places of interest took place, and was much appreciated.

A NEW COLLEGE OF PHARMACY.

On August 8, in Toronto, the ceremony of laying the corner-stone of the new College of Pharmacy, on Gerrard Street, next to St. James' Square Presbyterian Church, was performed. A number of members of the College Council, and others, gathered about the stone at the north-east corner of the building. Among the gentlemen present were E. Harvey, Guelph, President of the Council; W. B. Saunders, Stayner; R. Wrightman, Owen Sound; W. S. Robinson, N. C. Love, E. B. Shuttleworth, Dean of the College; A. W. Saunders, London; George Hodgetts, Treasurer of the College; R. W. Elliot, Hugh Miller, John Henderson, J. W. Pearce, R. R. Martin, and P. Jamieson. The ceremony of laying the stone was performed by Mr. E. Harvey, the President. A preserving-jar, placed in the cavity of the stone, contained a copy of the *Canadian Pharmaceutical Journal* for May, 1868, being the first issue of the journal published by the Canadian Pharmaceutical Society; also later copies of the same journal containing information about the pur-

chase of the site for the college, &c., Canadian coins, copies of the *Globe* containing the report of the Council meeting at Belleville and election of officers for the ensuing two years, and the autographs of a number of the gentlemen present.

Mr. HARVEY said: "We are assembled here to-day for the purpose of laying the corner-stone of the first College of Pharmacy building in Ontario, and I think I may say in Canada. After years of labour and careful husbandry of the funds of the College, I am proud to say the Council in connection with this institution have found themselves justified in undertaking the erection of the handsome building which we hope to have completed in time to hold our meeting in on the first Wednesday in February next. I feel proud, indeed, to perform the duty devolving upon me to-day, and trust that we may all be spared many years to occupy and make use of this handsome edifice."

The jar having been sealed, the President then placed it in the cavity of the stone. Mr. Harvey held a mason's hammer, resting the base of it on the stone, while he read as follows:—

"I now declare this corner-stone well and truly laid in due and ancient form, and pray the erection of this building may be brought to a successful issue, and that through the guidance and protection of an all-wise Providence, the loss of neither life nor limb may be sustained during the progress of such erection."

SOUTH AFRICAN PHARMACEUTICAL ASSOCIATION.

A PRELIMINARY MEETING of chemists and druggists was held on June 13 at the Public Library, King William's Town. Present: Messrs. Mucklow, McJannet, Tucker, Lumsden, Brauns, Abbott, and Cook.

Mr. Mucklow having been voted to the chair, Mr. Cook, hon. secretary, *pro tem.*, explained the reasons why the meeting was called and its objects.

It was moved and carried unanimously that an Association be formed, and thereupon a discussion arose as to the rules to be adopted.

It was resolved that the name of the Association be "The South African Pharmaceutical Association."

It was announced that replies favourable to the formation of an Association for the protection of the rights and interests of chemists in this colony had been received from the following chemists:—Messrs. Lennon, Tucker, Dutton, Smit, McJannet, Mager, Hamlin, Russell, James, Billingham, Austen, Broadhead, Wells, and H. C. Bell.

Mr. Cook then showed that it was desirable that a new Pharmacy Act be framed and passed, also that a change be made in the present constitution of the Medical Board in Cape Town.

Mr. Mucklow spoke in favour of a total repeal of the existing law, more particularly with regard to the Poison Act. He was in favour of assimilating, as far as possible, the Pharmacy Act of Great Britain to the requirements of the colony. Other speakers concurred, and it was the unanimous opinion of the meeting that the chairman had fully expressed the views of the chemists of the Eastern Province in general.

It was the undivided opinion of those present that chemists should be represented on the Board of Examination, and it was brought to the notice of the meeting that a well-known member of Parliament—one of the medical profession—had expressed a similar opinion to a Committee in the House of Assembly.

Mr. Mucklow proposed, and Mr. McJannet seconded—

That the meeting discuss certain rules to be submitted for approval at the next general meeting.

Mr. Cook moved with reference to Rule VIII.:—

That the subscription be one guinea per annum, payable in advance.

Seconded by Mr. Abbott.

Mr. Lumsden moved—

That after the lapse of three months from now an entrance fee of one guinea be charged.

Seconded by Mr. McJannet

After the rules were discussed seriatim, it was resolved—

That Messrs. Lumsden and Cook form a sub-committee for the purpose of revising the same to be presented at the next meeting.

Mr. Mucklow moved—

That Mr. G. E. Cook be appointed hon. secretary and treasurer.

Seconded by Mr. Lumsden, and carried unanimously.

Mr. Tucker moved—

That the next meeting take place in King William's Town on Friday, July 17, at 8.30 P.M.

Carried unanimously.

A vote of thanks having been unanimously accorded to the chairman, the meeting terminated.

The first general meeting of the Association was held in King William's Town on July 17. Present: Messrs. Mucklow, McJannet, Tucker, Drummond, Brauns, Lumsden, Abbott, and Cook.

Mr. Mucklow having taken the chair, the minutes of the last meeting were read and confirmed.

Correspondence was read from Messrs. Helmore, Billingham, Melass, S. Bössenberg, Groom, Cooper, Gardiner, Uhlig, Davison, Teitge, Bull, Fleischer, Constance, H. C. Bell, Meiring, Austen, and Russell.

The chairman explained that the secretary had at his instigation telegraphed to a number of chemists who were unable to attend, asking them whether if elected to act upon the Executive Committee they would accept, and that favourable replies had been received from Messrs. Heynes, Fleischer, Austen, Des Vages, Davison, and Constance.

The secretary's action was approved of by the members present.

It was resolved that the payment of accounts, &c., be left to the discretion of the hon. secretary and treasurer.

The rules as drawn up by the sub-committee, Messrs. Lumsden and Cook, were then discussed, and, after a few alterations made, were adopted.

A letter was read from Dr. Greathead, hon. secretary, Eastern Branch of the South African Medical Association, to Mr. Abbott, offering support on behalf of that Association in any action taken by the Pharmaceutical Association to improve either the laws relating to chemists and druggists or to the sale of poisons.

The election of officers for the ensuing year was then proceeded with, when Mr. J. A. D. Des Vages, M.L.A. (Willowmore), was elected president; Mr. A. E. Austen (Cradock), vice-president; Mr. G. E. Cook (King William's Town), hon. secretary and treasurer; and Messrs. McJannet (East London), J. Heynes (Cape Town), F. Constance (Port Elizabeth), E. Fleischer (Humansdorp), and A. Davison (Kimberley), as members of the Executive.

Mr. Drummond moved—

That the regret of the members of the Association present at the unavoidable absence of Mr. Walsh from the Colony be recorded on the minutes, otherwise his name on the Executive would have been cordially supported.

Carried.

Mr. Tucker moved—

That the Pharmaceutical Society of Great Britain be communicated with, with the view of obtaining assistance in the shape of hooks and periodicals.

Carried.

It was proposed by Mr. Brauns, and seconded by Mr. McJannet—

That Mr. Mucklow, on account of his unique position, be appointed an honorary member of the Association.

The thanks of the meeting were voted to Mr. Gleeson for the use of the room.

The usual vote of thanks to the chairman concluded the business of the meeting.

THE CHEMIST AND DRUGGISTS' Diary for 1886 is now in course of preparation, and we shall be glad to receive suggestions in reference to it. Advertisements for insertion in this work should be sent on early.



OFFICE—42 CANNON STREET, LONDON, E.C.

“SANITAS.”

THE BEST DISINFECTANT.

Non-Poisonous. Colourless. Gives no Stain. Fragrant.

Fluid Oil; Emulsion; Powder; Hard, Soft, Brown Windsor, and Toilet Soaps; Soap Powder; “Sanitas-Vaseline”; Veterinary Ointment; Tooth Powder; Toilet Powder; Toilet Fluid; Furniture Cream; Antiseptic Gauze; Fumigators.

GOLD MEDAL, CALCUTTA, 1883-84.

Liberal Terms, Show Cards, and Bills to the Trade.

Sole Manufacturers, **The “Sanitas” Co., Limited, Bethnal Green, E.**
C. T. KINGZETT, F.I.C., F.C.S., *Managing Director.*

SEE SEABURY & JOHNSON'S Advertisement of INDIA-RUBBER POROUS AND SPREAD PLASTERS on page 171.



THE
ONLY PURE
AND
PALATABLE
APERIENT.

HUNGARIAN NATURAL MINERAL WATER.

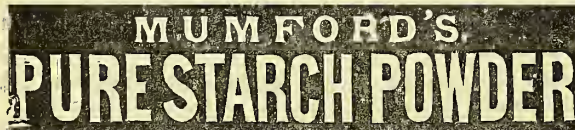
HUNGARIAN APERIENT WATERS have long ago superseded the antiquated German varieties, half the Salts of the latter being USELESS CHLORIDES (chiefly common Salt), whereas the Salts of **ÆSCULAP WATER** contain NINETY PER CENT. OF PURGATIVES.

ÆSCULAP is the ONLY Hungarian Water advertised to the public, all others having yielded to its UNDOUBTED SUPERIORITY.

THE ÆSCULAP BITTER WATER COMPANY, LIMITED,
38 SNOW HILL, LONDON, E.C.; and BUDA PESTH.



18s. per cwt. net, bag included; in 7, 14, 28, 56 lbs., 20s. per cwt., delivered free in London, and in 1 lb. Tins, 5s. per doz. BEST QUALITY; NO OIL EXTRACTED. Carefully cleaned and ground so as to retain the natural colour of the Seed without being heated.



In 7-lb., 14-lb., 28-lb., 56-lb., and 1-cwt. hags, 28s. per cwt., net, bag included, delivered free in London.



Finest powdered, 14s. per cwt.; in 7, 14, 28, 56 lb. Packages, 16s. per cwt. net, bag included, delivered free in London. Samples post free.

G. S. MUMFORD, STEAM MILLS, FARRINGTON ROAD, LONDON, E.C.

SCHWEPPE'S TABLE WATERS,

As Supplied to HER MAJESTY THE QUEEN.

CARRIAGE PAID on Full and Empties.

SCHWEPPE'S DRY GINGER ALE.

51 Berners Street, LONDON,

AND AT

Liverpool, Bristol, Derby, Glasgow, Sydney, & New York.

SCHIEFFELIN & CO. See page 138

MESSRS. ALLEN & HANBURY'S ADVTs. { See pages 138 and 139.

CHEVALIER'S PERLES (FLEXIBLE GELATINE CAPSULES),

Are made in six sizes from ten to eighty minims, and are guaranteed to contain only the very best Drugs.

These Perles dissolve in the stomach in from two to three minutes, and cannot possibly pass through the patient entire.

Samples and Price Lists on application to

CHEVALIER & CO., 17 BARTHOLOMEW CLOSE, LONDON.

HAY'S SOLUBLE ESSENCE OF GINGER. See page 76

HAY'S GINGER CHAMPAGNE. See page 78.

HAY'S SOLUBLE ESSENCE OF LEMON. See page 79.

EDITORIAL NOTES.

THE INTERNATIONAL PHARMACEUTICAL CONGRESS AT BRUSSELS.

A LARGE section of our space is occupied this month with the history of the proceedings of the sixth International Pharmaceutical Congress, which held its sessions at Brussels from August 31 to September 5 inclusive. The event was one of singular interest, and, as a demonstration of the influential position of Continental pharmacy, it was both remarkable and unique. Royalty patronised it; a chief Minister of State presided over it; a great City Council fêted it; foreign Governments appointed special delegates to its sessions; and its proceedings were reported all over Europe.

To an English observer all this was, as we have said, interesting and curious; perhaps more interesting and curious to us than to Continental pharmacists, who regard their profession from a different standpoint to that which we occupy. The pleasure and advantage of social intercourse, the new

ideas suggested and imbibed, and the incidental benefits generally picked up on such an occasion are of the highest value. Nor do we wish to underrate the eminence of many of the men who took part in the proceedings, nor their services to science. But we can hardly bring ourselves to describe the labours of the Congress as of importance. There was all the pomp, the ceremony, the insignia of the vastest business. The Council of Trent, the Diet of Worms, the Congress of Berlin could not have conducted their affairs with greater solemnity. The Brussels Congress, like these, laid down its logmas, ordered laws, and asserted claims of the most extensive character, discussed them earnestly enough, and voted upon them with all the appearance of faith in the power of such votes to accomplish the objects aimed at.

Consider some of the conclusions arrived at. The Congress resolved that pharmaceutical specialties, quack and secret medicines, should be entirely suppressed; they agreed over and over again that pharmacists ought to have prosperity insured to them, and be protected from competition by laws limiting the number of pharmacies in proportion to population; that they should everywhere rank with the members of other learned professions, and have the title of Doctor of Pharmacy; that they should make their own chemicals; that they, and they only, should supply medicines, to the exclusion of veterinarians, as well as of human physicians; and so forth. All these resolutions were passed in the public interest, and this, we are confident, was assumed in the most perfect good faith, though it certainly happened curiously that, as the Pharmaceutical Society of Athens naively puts it, the public interest always seems to demand the prosperity of the pharmacist.

Discussions of this character were curious, they may be said to have been amusing, but they can hardly be regarded as important. The reports on the adulteration of foods and on the analysis of drinking-waters, which were made very prominent, come under a different category. Brussels will soon be establishing a municipal laboratory, and disputes as to the water-supply are in actual progress. There was possibly some commercial as well as philanthropic purpose in that section of the labours of the Congress.

It is a point for consideration whether the Continental or the English view of pharmacy is the true one. Are we right, and all other nations wrong? Is pharmacy really a profession which demands years of university studies, and then needs to be fostered and protected by the State? Pharmacists on the Continent, even the smallest of them, accept the designation of *savants* without a blush. We do not learn that the character of their trade differs much from the ordinary run of an English dispensing business. As a rule they leave the dirty trade to the druggists and the oilmen, and the fancy trade to the perfumer. Some of them are truly scientific men, but these are altogether exceptional. Scheele was a Swedish apotheker. But it was not the Swedish system of pharmacy that made Scheele, any more than it was the English system which made Sir Isaac Newton, who once worked with a chemist. The English system admits of a far wider range of men and businesses. We have here as good and as high-class pharmacists as any in France or Germany, and we have businesses superior to any in those countries. We have too men and businesses which are below their west level; but these only exist because they are wanted. Many of the ideas enunciated at the Congress are professedly such as are incompatible with commercial aptitude. The true Continental pharmacist does not desire to be regarded as a commercial man at all. Shall we aim at such a condition of mind, body, and estate; or shall we be content with our free system of letting each man follow the avocation for which he finds his abilities best fit him?

THE INTERNATIONAL PHARMACOPŒIA.

THE publication by the International Pharmaceutical Congress of a project of an International Pharmacopœia is an event which cannot be passed without note in these columns. On another page we give the leading features of the work, and it is not our present intention to criticise the details. The general opinion of English pharmacists will probably be that the principal fault of the project is that it contains too much. Had it, in the first instance, selected, say fifty of the most potent preparations and attained uniformity therein, then proceeded downwards, the object aimed at would have been more easily attained. This is just what will result in practice. Indeed, the new edition of our own Pharmacopœia has, in a sense, anticipated this international project by bringing the potency of several very important preparations to strength akin to that of Continental Pharmacopœias, and it was announced at the Congress that the Austrian Pharmacopœia Committee will use the project as a basis for their forthcoming edition.

We are not disposed to complain of the insertion of substances and preparations which we may think are not necessary in an International Pharmacopœia. They will cause no practical inconvenience. The introduction and description of definite chemicals may have been a work of supererogation, but these will only add a very few pages to a work which will, after all, be of but small bulk. The main purpose, namely, that of arriving at some sort of agreement and getting that agreement put down in actual type, has been attained. The work will be revised and published as the provisional scheme of the Congress. It will be subject to further correction, and will not be authoritatively adopted till the next Congress in 1888. But it will stand for what it is—the general suggestions of representative pharmacists of all countries, and no new Pharmacopœia Committee, however conservative or however contemptuous of pharmaceutical opinion, will be able to afford to ignore this compilation. Moreover, there will be no reason why a physician should not prescribe for such of his patients as are likely to travel by the "Pharm. Int.," and if he does so he may depend on uniformity in the medicine supplied all the world over.

It remains to add a word of cordial praise to M. Von Waldheim and to his coadjutor Dr. Goddefroi, who have carried out this work. Theirs has been a task of no light magnitude—ininitely greater than if they had had no assistance. The work does not present their ideas of what an International Pharmacopœia should be; it is their presentation in scholarly Latin of the compromise which they have effected among the delegates of all lands. The accomplishment of this task must enhance the esteem which these eminent Austrian pharmacists had already won among their fellow-pharmacists of every nation.

HOW TO GET ON IN PHARMACY.

WE are thankful to our correspondent, "Cumberland," for the broad sunbeam with which he has illuminated the gloomy aspect of the drug trade as it is generally presented in our Correspondence columns. The "friend" whose career he sketches, and whose concerns he appears to know very intimately, had assuredly no exceptional advantages in starting. He had to borrow money to pay his examination-fees. But he was the right sort to lend to. With fair health and barring accidents, men of his type cannot be kept under. Not so eager for wealth as to plunge into speculation, he had enterprise enough to go on from step to step after having

had courage enough to begin at the bottom. This was the way they used to proceed in the good old days which we hear about, and which we are led to believe formed the golden era of the drug trade, passed away for ever. If we rightly understand our correspondent's statement, his "friend," beginning at a little below zero, has, after seven years of work, saved the sum of 1,440*l*. He is, we presume, a young man still, with eye not yet dimmed nor natural force abated.

These figures justify the conclusion that there are still bright prospects for the drug trade. Our friend's subsequent estimation of other people's incomes may be a little too rosy, or his circle of pharmaceutical acquaintance may be favoured above the average. But it appears to us that what his letter proves is that a young man, with the will and the ability to adapt himself to his surroundings, has at least as good a chance to get on in the drug trade as in any other. He should get as thorough a pharmaceutical training as it is possible for him to obtain. But having got that he should not object to take a small grocery business, and add thereto the trade of a druggist if that appears to be the best opening. This is not the course we would advise to one who can do better. A drug trade to which some analytical work can be added is pleasanter and is likely to be more profitable. But what is wanted, as we just now said, is the willingness as well as the ability to start on the road to fortune by which ever door stands open.

Trade Notes.

MESSRS. HORN & SON, patent agents, have removed from 172 Strand to Somerset Chambers, 151 Strand, next to Somerset House.

WE have to apologise to Messrs. Lynch & Co. for accidentally omitting their advertisement of trusses in our last issue. We are not noted for offending in that manner.

THE A1 brand of menthol is now sold under the name of the proprietor, J. G. Shirley, who claims to have been the first to introduce menthol into this country.

THE agency for this country for the well-known brand of quinine manufactured by Mr. Conrad Zimmer, of Sachsenhausen, Frankfort-on-the-Main, has been entrusted to Messrs. A. & M. Zimmermann, 27 Mincing Lane, London, E.C.

REFERRING to the recent discount and carriage paying announcements, Messrs. Bourne, Johnson & Latimer ask us to state that they allow 10 per cent. on all orders over 1*l*., that they do not charge a booking fee, and that they do not refuse to receive enclosures. They wish it to be understood that they are by no means panicstricken by the action of rival houses.

A VERY excellent line of meat essences, beef tea in skins and in tins, beef-tea jelly, and other similar dietetic preparations, is manufactured by Messrs. George Mason & Co. (Limited), of 417 King's Road, Chelsea. The manager is a connection of the "Brand" family, and those products of the firm which we have tested are worthy of the highest commendation both as regards flavour and strength. They are sold at very moderate prices.

AN important advertisement is published in another part of this journal referring to the phospho-citric acid patented and manufactured by Messrs. Hassall & Co., York Road, King's Cross, London. Aërated-water makers must consider that the statements made concerning this product, which are endorsed by many good men, are of considerable importance, from the point of view of economy, as well as from that of purity. We shall be glad to have information concerning the value of this article from any aërated-water manufacturers who have practically tested it.

Obituary.

ARNOLD.—On August 6, at his residence, 23 Saumarez Street, Guernsey, Mr. Adolphus Arnold, senior partner in the firm of A. Arnold & Co., chemists, Guernsey. Aged 69.

COCKING.—On August 15, John Tonkin Cocking, poro-plastic feltmaker, 50 Welbeck Street, London, and Clifton Place, Plymouth. Aged 58. Mr. J. T. Cocking was the patentee of the poro-plastic felt for surgical bandages, the renewal of which was reported by us last month.

GABRIEL.—On Sunday, August 16, 1885, at his residence, Mr. John Wild Gabriel, late of the firm of Gabriel & Troke, wholesale druggists, of City Road, London. Aged 80.

GLAISYER.—On August 7, at Brighton, in the 84th year of his age, Mr. John Horne Glaisyer, chemist and druggist. The deceased was the eldest son of the late Mr. John Glaisyer, the founder of the old-established firm of Glaisyer & Kemp, chemists, 12 North Street, Brighton. Mr. J. H. Glaisyer followed the profession of his father, and for some years carried on business at Southampton, but eventually on his retirement from business, he returned to Brighton. The funeral took place on August 11 at the Friends' Burial Ground, Black Rock.

GOULD.—On August 7, at Fowey, Robert George Gould, late chemist and druggist, Andover, in his 35th year.

GREEN.—At Fairfield Lodge, Swindon, Wilts, Matilda Rebecca, the beloved wife of John Green, chemist. Aged 47. Deeply lamented.

MAITLAND.—On August 11, at 233 East India Road, London, Fannie, the beloved wife of Pelham C. Maitland, chemist, late of Chapel Street, Stonehouse, Devon.

SHAW.—On May 11, at 10 Berkeley Place, Cheltenham, Alexander Henry Shaw, formerly a chemist, a justice of the peace, and alderman at Stockport. Aged 71.

Notices of deaths, marriages, removals, and changes in firms are published free if sent to us properly authenticated.

Suggestions.

FOR KEEPING OFF MOSQUITOES the *Angler* recommends 3 parts olive oil, 2 parts oil of pennyroyal, 1 part glycerine, 1 part ammonia. To be well shaken before applying to face and hands. Avoid getting the mixture into the eyes.

PRESERVING PLANTS, &c.—Mr. P. Hennings states that during the last three years certain fruits, flowers, and other portions of plants have been preserved in the botanical museum of the Berlin University by means of a solution consisting of 4 parts of water and 1 part of alcohol, saturated with salicylic acid.

HOT-WATER BOTTLES (stoneware), 3*d*. each, are natural seltzer bottles, sold by a drug firm in the North. Empty Pullna-water bottles are also becoming useful (so a country chemist informs us); labelled "Poison," &c., they suit well for supplies of *aqua* for hydropathic establishments, and decorated with floral designs they look well upon a wall-bracket.

WE have received a specimen "Toilet Almanac" for circulation by chemists from Mr. John Davis, of 201 Old Kent Road. It need hardly be said that the printing and general get-up is neat and attractive. The literary contents are good in their way, but are capable of improvement. For instance, the notes on disinfection would be more useful if proportions to make solutions for actual use were given. Such matter, however, and other "useful notes" are better adapted for chemists' almanacs than the general stock literature of such productions. We may, perhaps, venture to recommend the substitution of "Aërated" for "Ærated," and "plaster" for "plaister." The persistence of printers in perpetuating these errors demands stern measures on the part of chemists, who should know better.

EDUCATIONAL INFORMATION.

HOW TO BECOME A PHARMACIST.

The educational qualifications of a chemist and druggist, and the examinations whereby those qualifications are tested, are authorised by the Pharmacy Acts of 1852 and 1868.

The Pharmaceutical Society of Great Britain (17 Bloomsbury Square, London, and 36 York Place, Edinburgh) is the body authorised by that Act to carry out these examinations, and their regulations, approved by the Privy Council, are as follows:—

PRELIMINARY EXAMINATION.

(Fee 2l. 2s.)

[Passing this examination confers no legal status, but it must be passed before entering for the Minor examination. It is usual to pass it either before commencing the period of apprenticeship or in the early days of apprenticeship, but no time is stipulated.]

Certificates of Having Passed.—The following are accepted in lieu of the Preliminary examination, provided that Latin, arithmetic, and English were included in the subjects of the examination for which the certificate was granted:—The local and higher examinations of the universities of Oxford, Cambridge, Durham, Edinburgh, Aberdeen, Glasgow, St. Andrews, and Queen's University (Ireland). The Matriculation and entrance, and certain higher examinations of the universities of London and Dublin, of Victoria University, of Owens College, and of the Royal University of Ireland. The certificate of the Oxford and Cambridge Schools Examination Board. The Preliminary examinations of the Royal Colleges of Surgeons of England and of Ireland, of the Apothecaries Society of London, of Ireland, and of the Royal Colleges of Physicians and Surgeons of Edinburgh, and of the Faculty of Physicians and Surgeons of Glasgow. The first and second class certificates of the College of Preceptors, and the Preliminary examination of the Incorporated Law Society. In submitting any of the above certificates, the candidate must also send the fee.

Failing the possession of any of the above certificates, the Preliminary examination as prescribed must be passed.

This Examination is held at the following centres throughout Great Britain, at 11 A.M., on the second Tuesdays in January, April, July, and October in every year:—

Aberdeen	Carmarthen	Exeter	Lincoln	Oxford
Birmingham	Carnarvon	Glasgow	Liverpool	Peterborough
Brighton	Cheltenham	Guersey	London	Sheffield
Bristol	Darlington	Hull	Manchester	Shrewsbury
Cambridge	Douglas, Isle	Inverness	Newcastle	Southampton
Canterbury	of Man	Jersey	Northampton	Truro
Gardiff	Dundee	Lancaster	Norwich	Worcester
Carlisle	Edinburgh	Leeds	Nottingham	York

Candidates must give notice to the Registrar in London on a printed form of application, to be obtained from him, and pay the fee, not less than fourteen days prior to that on which the examination is to be held. Each candidate must state at which of the centres he desires to present himself.

The Examination is a written one, and comprises—

Latin.—Grammar; Translation of simple sentences from English into Latin; Translation into English of a paragraph from *Cæsar*—De Bello Gallico, Book I., or *Virgil*—Æneid, Book I.

In each examination paper a passage from both of the authors will be given, but a candidate will be required to translate one only of such passages.

Arithmetic.—The first four rules—Simple and Compound, Vulgar Fractions and Decimals, Simple and Compound Proportion, a thorough knowledge of the British and Metrical Systems of Weights and Measures.

English.—Grammar and Composition.

In awarding marks, spelling and the quality of the handwriting are taken into account.

The following was the Preliminary Examination Paper given to candidates in October, 1884.

LATIN.

Time allowed: One Hour and a Half.

Translate into English either A. (*Cæsar*) or B. (*Virgil*).

(The Candidate: must not attempt both.)

A. CÆSAR.

1. Ita, sive casu, sive consilio deorum immortalium, quæ pars civitatis Helvetiæ insignem calamitatem populo Romano intulerat, ea princeps pocnas persolvit. Qua in re Cæsar non solum publicas, sed etiam privatas injurias ultus est, quod ejus soceri L. Pisois avum, L. Pisoem legatum, Tigurini eodem proelio, quo Cassium, interfecerant.

2. Dum paucos dies ad Vesoutionem rei frumentariæ commeatusque causa moratur, ex percantione nostrorum vocibusque Gallorum ac mercatorum, qui ingenti magnitudine corporum Germanos, incredibili virtute atque exercitatione in armis esse prædicabant, sæpenumero sese cum his congressos ne vultum quidem atque aciem oculorum ferre potuisse, tantus subito timor omnem exercitum occupavit, ut non mediocriter omnium mentes animosque perturbaret.

Grammatical Questions.

(For those Candidates who take Cæsar.)

1. Decline in full *casu*, *consilio*, *Helvetiæ civitatis*, *qua re*. (Par. 1.)
2. Give the first person of the present and perfect indicative, and also the supine and infinitive, of the verbs in italics.
3. What person, number, gender, and case is *qui*, and why? (Par. 2.)
4. From what verb does *congressos* come? What part of the verb is it? Explain the construction. (Par. 2.)

B. VIRGIL.

1. Postquam exempta fames epulis mensæque remotæ,
Amisos longo socios sermone requirunt,
Spemque metumque inter dubii, seu vivere credant
Sive extrema pati, nec jam exaudire vocatos.
Præcipue plus Aeneas, nunc acris Orontei,
Nunc Amyci casum gemit, et crudelia secum
Fata Lyci, fortemque Gyan, fortemque Cloanthum.

2. Hæc ait: et Mala genitum demittit ab atri,
Ut terræ, utque novæ pateant Carthaginis arces
Hospitio Teucris, ne fati nescia Dido
Finihus arceat. Volat ille per æra magnum
Remigio alarum, ac Lihyæ citus adstitit oris.
Et jam jussa facit; ponuntque ferocia Poeni
Corda, volente deo; in primis regina quietum
Accipit in Teucros animum mentemque heugnam.

Grammatical Questions.

(For those Candidates who take Virgil.)

1. Decline in full *socios*, *sermone*, *plus Aeneas*. (Par. 1.)
2. Give the first person of the present and perfect indicative, and also the supine and infinitive, of the verbs in italics.
3. Explain the construction of *ut pateant*. (Par. 2.)
4. From what verb does *volente* come? Explain the construction.

For all Candidates.

Translate into Latin:—

1. The general is braver than his soldiers.
2. It is a Roman's duty to die for his country.
3. The Trojans came to the city of Carthage, which Dido founded.
4. Virtue must not only be cultivated, but also loved.
5. Croesus sent ambassadors to Delphi to inquire concerning the fortune of the war.

ARITHMETIC.

Time allowed: One Hour and a Half.

1. Multiply the difference between 12 cwt. 3 qrs. 17 lbs. 10 oz. and 5 cwt. 2 qrs. 23 lbs. 11 oz. by 528.
2. A man paid away $\frac{1}{4}$ of a legacy, then $\frac{1}{3}$ of the remainder, and finally $\frac{1}{4}$ of his first payment. After these three payments he had £90 £s. 2d. left. Find the value of the original legacy.

3. Reduce $\frac{7}{8}$ of £10 6s. 7 $\frac{1}{2}$ d. to the decimal of £'015.
4. If '15 of an estate be worth £280, find the value of '215 of it.
5. A barrel containing 80 litres of liquid weighs 40 kilog. 5 hectog.; empty, it weighs 3 kilog. 9 hectog.: find the weight of a litre of the liquid.
6. If 13 men in 5 days build a wall $\frac{1}{2}$ of a furlong in length, 5 feet high, and 2 feet thick, what length will 17 men build in 11 days?
7. A. invests £200 and B. £500 in a business; after 4 months A. adds £800, and after 5 months B. adds £700; at the end of the year the profits are £443 5s.: how should they be divided?

ENGLISH.

Time allowed: One Hour and a Half.

1. How do you distinguish between *prepositions*, *adverbs*, and *conjunctions*? Give examples.
2. Analyse the following sentence:—"The trumpets had no sooner given the signal than the champions vanished from their posts with the speed of lightning, and closed in the centre of the lists with the shock of a thunderbolt."
3. Parse fully the following sentence:—
"Great wits are sure to madness near allied,
And thin partitions do their hounds divide."
4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where requisite:—the traveller made three quick steps towards the jail then turning short tell me said he has that unnatural captain sent you nothing to relieve your distresses call him not unnatural replied the other god's blessing be upon him he sent me a great deal of money but i made a bad use of it i lost it by being security for a gentleman that was my landlord and was stripped of all i had in the world besides.
5. Write a short composition on *one* of the following subjects:—
The Electric Light.
The Health Exhibition.
The Advantages of Travelling.
Self-culture.

THE MINOR EXAMINATION.

(Fee 3l. 3s.)

[This is the legally qualifying examination, which must be passed before the candidate may term himself a "chemist and druggist." The Board of Examiners meet in London in February, April, June, July, October, and December; in Edinburgh in January, April, July, and October. Candidates wishing to be examined must apply to the registrar (17 Bloomsbury Square) before the first day of the month in which the examinations are to be held. It is required by the Pharmaceutical Society that the candidate must have previously passed the Preliminary examination, and must have attained the age of twenty-one before he can present himself. With his application must be sent the fee, a registrar's certificate of birth, and a certified declaration that for three years he has been registered or employed as an apprentice or student, or has otherwise for three years been practically engaged in the translation and dispensing of prescriptions. Printed forms for such declarations can be had from the Registrar.]

The following form the subjects of examination:—

Prescriptions.—The candidate is required to read without abbreviation autograph prescriptions; translate them into English; and render a literal as well as an appropriate translation of the directions for use. To detect errors, discover unsual doses, and have a general knowledge of Posology; also to render in good Latin ordinary prescriptions written in English.

Practical Dispensing.—To weigh, measure, and compound medicines; write the directions in concise language in a neat and distinct hand; to finish and properly direct each package. [In awarding marks in this subject the time taken by the candidate in doing the work is taken into account.]

Pharmacy.—To recognise the preparations of the Pharmacopœia which are not of a definite chemical nature, and have well marked physical characters, such as extracts, tinctures, powders, &c.; to give the proportions of the active ingredients, and possess a practical knowledge of the processes, and the principles of the processes, by which they are made, and of the best excipients and methods of manipulation for forming Emulsions, Pills, &c.

Materia Medica.—To recognise specimens of roots, barks, leaves, fruits, resins, gums, animal substances, &c., used in medicine; give the botanica and zoological names of the plants, &c., yielding them, and the Natural Families to which they belong; name the countries and sources from which they are obtained, the official preparations into which they enter, and judge the quality and freedom from adulteration or otherwise of the specimens.

Botany.—To recognise the more important indigenous plants used in medicine. To possess a general knowledge of the elementary structure of plants, and the structure and distinctive characters of roots, stems, leaves, and their parts. To name and describe the various parts of the flower.

Chemistry.—To recognise the ordinary chemicals used in medicine. To possess a practical knowledge of the processes by which they are produced, the composition of such as are compound, and explain the decompositions that occur in their production and admixture, by equation or diagrams. To determine practically, by means of tests, the presence in solution of the chemicals in common use, and explain the reactions which occur in each case. To possess a general knowledge of the laws of chemical philosophy, and a practical knowledge of the means of determining specific gravities, densities, and temperature, and of the instruments appertaining thereto, and the physical and chemical constitution of the atmosphere.

Descriptive narratives of this examination have been published in THE CHEMIST AND DRUGGIST for June, July, and August of this year. From these sources may be gathered a fairly correct idea of the scope and character of the Minor examination.

THE MAJOR EXAMINATION.

The previously-named examinations are all that are required by law to entitle a man to assume the title and to carry on the business of a "chemist and druggist." Some students, however, proceed to the optional "Major examination," the passing of which confers the right to the title of "pharmaceutical chemist." Candidates must have passed the Minor examination at least three months previously. The Major examination is held at the same times as named for the Minor.

The following from the subjects of examination:—

Materia Medica.—This comprises a practical knowledge of the methods of estimating the value of important drugs, of obtaining their active proximate constituents in a separate state; of identifying them and ascertaining their purity or impurity by tests.

Botany.—This comprises an intimate acquaintance with the parts of the flower, fruit, and seed; the functions and mode of arrangement of the different organs of plants; a knowledge of the general principles of classification, and of the Linnæan and De Candolle's systems. The candidate must be able to distinguish practically between each of the following Natural Orders:—Ranunculaceæ, Papaveraceæ, Crucifereæ, Malvaceæ, Leguminosæ, Rosaceæ, Cucurbitaceæ, Umbellifereæ, Compositæ, Gentianaceæ, Convolvulaceæ, Solanaceæ, Atropaceæ, Labiata, Scrophulariaceæ, Polygonaceæ, Euphorbiaceæ, Orchidaceæ, Iridaceæ, Liliaceæ, Melanthaceæ, Gramineæ; and refer to their respective orders such specimens as may be shown to him.

Chemistry.—This comprehends an intimate knowledge of the laws of chemical philosophy, a practical knowledge of the nature and properties of the elements and their compounds, both organic and inorganic, especially those used in medicine or the arts. The different combinations and decompositions must be explained by equations; also the qualitative analysis of the more important chemicals, e.g., Nitrates, Chlorides, Carbonates, Sulphates, Phosphates, Oxalates, Tartrates, &c., and the detection of impurities in them, and the volumetric estimation of the strength of all Pharmacopœia preparations in which standard solutions are ordered to be used.

An elementary knowledge of the properties of light, heat, electricity, and magnetism is also required.

In the practical portion of the Major examination standard works of reference are provided for the use of candidates, at the discretion of the Examiner. No other books or memoranda are allowed.

N.B.—A description of the Major examination by a successful candidate is given in this number of THE CHEMIST AND DRUGGIST, see page .

Having passed any of the examinations hereinbefore named, the candidate acquires all necessary legal status.

It is quite optional on his part whether he will or will not join the Pharmaceutical Society as an apprentice, associate, or member.

There is no compulsory curriculum for pharmaceutical candidates; the Pharmaceutical Council are striving to get authority to enforce a certain period of study on candidates, but this has not yet been conceded. At present, however, most students spend some time at one or other of the pharma-

ceutical schools of London or the provinces before presenting themselves for examination. We annex some details of these schools.

PHARMACEUTICAL EDUCATION IN IRELAND.

Pharmacists in Ireland hold a position rather different from that of their British brethren. Before the passing of the Pharmacy Act (Ireland) 1875 the dispensing of prescriptions was legally confined to licentiates of the Apothecaries' Hall of Ireland. A class of tradesmen dealing in drugs and dry salteries existed with the name of chemists and druggists. They did not dispense prescriptions. The Pharmacy Act created a new class of men legally qualified to dispense prescriptions, but not connected with the Apothecaries' Society. The title of "pharmaceutical chemists" was conferred upon them. The Pharmaceutical Society of Ireland was entrusted with the administration of the Act, with power to register pharmaceutical chemists, to examine candidates for registration, and to prosecute for offences against the Act. Existing rights were recognised by permitting licentiates of the Apothecaries' Hall to register as pharmaceutical chemists without examination on payment of a fee of 3*l.* 3*s.* The examinations differ from those of the British Society in important particulars.

Candidates for the Preliminary examination must be sixteen years of age and upwards. They are examined in Latin, English, arithmetic, and the rudiments of chemistry and botany. Certain examinations are accepted in place of this. The fee is 2*l.* 2*s.*, and the examination is held in Dublin four times a year.

Candidates for the pharmaceutical examination must be twenty-one years of age, and must have passed the Preliminary examination at least one year previously. They must have been practically engaged in compounding and dispensing for at least two years, and must have attended a practical course in chemistry at a recognised school. The examination is held four times a year, the subjects being botany, general and pharmaceutical chemistry, including qualitative and volumetric analysis, and practical pharmacy, including dispensing. Candidates for the licence who had not passed their Preliminary examination before January 3, 1883, must have served a *bonâ-fide* apprenticeship of three years, or have acted as assistant for four years in the sole employ of a pharmaceutical chemist or apothecary.

Information respecting the Irish examinations can be obtained from the Registrar, Pharmaceutical Society, Dublin.

PHARMACEUTICAL SCHOOLS.

THE SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

CHEMISTRY AND PHARMACY	Emeritus Professor REDWOOD, Ph.D., F.I.C., F.C.S.
BOTANY AND MATERIA MEDICA	Professor BENTLEY, M.R.C.S., F.L.S.
PRACTICAL CHEMISTRY.. ..	Professor ATTFIELD, Ph.D., F.R.S., F.I.C., F.C.S.
CHEMISTRY	Professor WYNDHAM DUNSTAN, F.C.S.
PRACTICAL PHARMACY.. ..	Mr. JOSEPH INC, F.L.S., under the general direction of Prof. Redwood, Ph.D., &c.

The forty-fourth session will commence on October 1, and will terminate the end of July, 1886. There are two courses in each session, the second beginning on March 1.

The botany lectures, by Professor Bentley, are delivered on Thursday, Friday, and Saturday mornings at 9 A.M. Each course consists of about sixty lectures. The first comprises botany and materia medica, with especial reference to structural botany and the use of the microscope in distinguishing the various drugs; and the second also comprising botany and materia medica, but with especial reference to practical botany and the classification of plants. A part of the second course is delivered in the gardens of the Royal Botanic Society, Regent's Park, at 8 A.M. Fees:—For one course, 2*l.* 2*s.*; for the two courses, 3*l.* 3*s.*; practical botany (Botanic Gardens), 1*l.* 1*s.*; perpetual admission, 4*l.* 4*s.*

Chemistry and pharmacy lectures are given at 9 A.M. on Mondays, Tuesdays, and Wednesdays. There are two courses, of about sixty lectures each, as in the botany lectures. Fees:—For one course, 3*l.* 3*s.*; for two courses, 4*l.* 4*s.*; for perpetual admission, 5*l.* 5*s.*

The practical pharmacy class (reading prescriptions, dispensing and recognition of galenical preparations), twice a week. Fee, 1*l.* 1*s.*

Practical chemistry is taught in the laboratories from 10 A.M. to 5 P.M. (Saturdays till 2 P.M.) daily. Students can work the whole time or partially.

The fees depend on the time devoted. For full-time students the fee for the entire session is 26*l.* 5*s.*

Many valuable prizes are offered for competition among the students.

The prizes of the School of Pharmacy, Bloomsbury Square, will be distributed on Wednesday, October 7, at 8 P.M. An address to the students will be delivered by James Dewar, M.A., F.R.S., Jacksonian Professor in the University of Cambridge, and Fullerton Professor of Chemistry in the Royal Institution.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN. (NORTH BRITISH BRANCH.)

36 York Place, Edinburgh.

Arrangements under which pharmaceutical students are admitted on special terms to the classes of extramural lectures.

Winter Session.—Lectures begin on November 3, and continue until the end of April following.

Chemistry (a course of 100 lectures, including elementary chemical physics, inorganic and organic chemistry).—In Surgeons' Hall, by Dr. Stevenson Macadam, F.C.S., &c.; in Minto House, by Mr. Falconer King, F.C.S., &c.

Materia Medica (including therapeutics).—A course of 50 lectures, in Minto House, by Dr. Wm. Craig, and in Surgeons' Hall by Dr. F. W. Moinet.

Summer Session.—Lectures generally begin on the first day of May, and continue until the end of July.

Botany (50 lectures).—In Minto House, by Mr. A. N. McAlpine, B.Sc. Another course for pharmaceutical students only is given by Mr. Rakray M.A., B.Sc.

Materia Medica.—Same as the winter course.

No Chemistry lectures during summer session.

Practical Chemistry.—The laboratories of Dr. Stevenson Macadam and Mr. Falconer King are open throughout the year, so that pharmaceutical men may enter upon a course of instruction at any time. The fees are moderate, and include all apparatus and chemicals.

Further particulars may be had from Mr. Peter MacEwan, Secretary to the Society in Scotland.

THE SOUTH LONDON SCHOOL OF PHARMACY.

325 Kennington Road, S.E.

Director.—Dr. JOHN MUTER.

Secretary.—Mr. WILLIAM BAXTER.

The course of oral instruction for pharmaceutical students includes sixty lectures on elementary and sixty on advanced chemistry and physics; thirty lectures on materia medica, both elementary and advanced; thirty on botany in each division; fifty on practical pharmacy and dispensing; and thirty lessons in medical Latin. Compounding fee for all classes: For the Junior (Minor) division, 14*l.* 14*s.*; for the senior (Major) division, 18*l.* 18*s.*; for both, 26*l.* 5*s.* Instruction is also given in scientific subjects required for medical and other examinations, and in all that is necessary to qualify men as public analysts.

WESTMINSTER COLLEGE OF CHEMISTRY AND PHARMACY.

Trinity Square, London, S.E.

Proprietors.—Messrs. WILLS & WOITON.

The session extends from September 1 till July 20.

At this college students are taken in three divisions, namely:—(1) Preliminary; daily classes from 10 A.M. to 12 A.M. Fees:—one month, 2*l.* 2*s.*; three months, 5*l.* 5*s.* (2) Minor or Major, including lectures, classes, and laboratory instructions. Fees:—One term (six weeks), 6*l.* 6*s.*; complete course (fourteen weeks), 9*l.* 9*s.*; additional terms, 3*l.* 3*s.* each. Minor and Major, twelve months' course, 15*l.* 15*s.*

Analytical and microscopical instruction is given at the following rates:—One month, 5*l.* 5*s.*; three months, 10*l.* 10*s.*; twelve months, 21*l.*

Evening classes are held for Preliminary and Minor students. Fees:—Preliminary (Fridays, 7 to 9 P.M.), one month, 6*s.*; three months, 15*s.* Minor (Tuesdays and Thursdays, 7 to 9 P.M.), one month, 10*s.* 6*d.*; three months, 21*s.*; twelve months, 3*l.* 3*s.*

Postal System.—Fee for Preliminary examination, 10*s.* 6*d.*; for Minor, or Major, 1*l.* 1*s.* Courses of lectures on all the subjects of the examinations are sent through the post from the college, the student returning his last lecture when he receives a new one. Powders for analysis, and other helps, are also sent.

CENTRAL SCHOOL OF CHEMISTRY AND PHARMACY.

173 *Marylebone Road, London, N.W.*

Director—Mr. JOHN WOODLAND.

Lecturers, Mr. J. Woodland, F.L.S., and Mr. J. F. Burnett, F.C.S.

The session began on September 2, and is divided into three complete courses of lectures and classes; one commencing on September 2, and terminating at the December examinations; another commencing the beginning of January and terminating at the April examinations; and the third extending from April to the July examinations.

The fees for the above courses are 10*l.* 10*s.*, 10*l.* 10*s.*, and 8*l.* 8*s.* respectively. For the whole year 21*l.*, or one month 4*l.* 4*s.*; two months, 7*l.* 7*s.*; three months, 9*l.* 9*s.*

Evening classes for pharmaceutical students are also held on Mondays, Wednesdays, and Fridays for Minor students, and on Tuesdays and Thursdays for Major students. Terms, one guinea per month.

MANCHESTER COLLEGE OF CHEMISTRY AND PHARMACY.

225 *Oxford Street, Manchester.*

The director, Mr. W. S. Turner, makes a specialty of personal attention to comparatively small classes. He is assisted by Mr. George Clayton. There are separate classes in the afternoon and evening for the Preliminary examination; fees, 1*l.* 1*s.* for one month, and 5*l.* 5*s.* for six months. Three sets of classes for the Minor examination, full time, afternoon and evening; fees for the full-time class (three months' course), 9*l.* 9*s.*, or 5*l.* 5*s.*, according to period; for either of the others (six months' course), 5*l.* 5*s.* or 4*l.* 4*s.* For the Major examination there is the full-time class; fees, 2*l.* 2*s.* per month; and the evening class, fee, 15*s.* per month. Mr. Turner's fees are inclusive of necessary apparatus and chemicals.

THE LIVERPOOL SCHOOL OF PHARMACY.

36 *Oxford Street, Liverpool.*

Principal—Mr. JOHN S. WARD.

The curriculum extends over three months, and covers all the subjects of the pharmaceutical examinations. There are separate courses during the day and in the evening. Fees for the day classes, 3*l.* per month; 7*l.* 10*s.* for three months; for the evening classes, 1*l.* per month; 4*l.* 10*s.* for six months. There are evening classes for Preliminary pupils. Fee for a six-months' course, 3*l.* 10*s.*

OWENS COLLEGE, MANCHESTER.

VICTORIA UNIVERSITY.

In this institution there is a pharmaceutical department in which instruction adapted to the requirements of students preparing for the pharmaceutical examinations is given both in day and evening classes.

Students before entering on the special pharmaceutical courses must either possess a competent knowledge of chemistry and botany, or must acquire this by passing through the college courses under Professors Roscoe and Schorlemmer (chemistry), and Professor Williamson and Mr. Marshall Ward (botany). The pharmaceutical course (day classes) extends from October to the end of March, and includes pharmaceutical chemistry, by Mr. W. Elborne, fee 3*l.* 3*s.*; materia medica, by Professor Leech and Mr. Elborne, fee 2*l.* 2*s.*; pharmacy and dispensing, Mr. Elborne, fee 3*l.* 3*s.* Laboratory, under the supervision of Mr. Elborne, 9*l.* 9*s.* for a six months' daily course. Fewer days or a shorter period can be taken at proportionate rates.

Evening classes from October to end of March in pharmaceutical chemistry, materia medica, and pharmacy and dispensing. Fees, respectively, 1*l.* 11*s.* 6*d.*, 1*l.* 11*s.* 6*d.*, and 2*l.* 2*s.*

EDINBURGH PHARMACEUTICAL CLASSES,

41 *Chambers Street, Edinburgh.*

Day and evening classes in chemistry, botany, and materia medica.

Tutors.—Dr. Drinkwater, F.C.S., Mr. Ratray, M.A., B.Sc., &c.

Laboratory accommodation for forty students.

Correspondence classes in all the subjects for Minor and Major.

Fees.—Day classes, 2*l.* 2*s.* per subject per session; evening classes, 1*l.* 1*s.* per subject per session; evening practical chemistry, 2*l.* 2*s.*

Particulars from Dr. Drinkwater, Chemical Laboratory, 41 Chambers Street, Edinburgh.

Mr. J. Rutherford Hill, pharmaceutical chemist at the Royal Public Dispensary, 21 West Richmond Street, conducts tutorial classes for the Minor and Major examinations.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

Birmingham.

The classes for pharmaceutical students in connection with the above Association will be resumed on Monday, October 5, 1885, at 90 New Street, Birmingham. The session will extend from October to June.

PRELIMINARY.

A class will meet on Monday and Wednesday evenings at half-past eight o'clock. Fee, 3*l.* 3*s.*; lecturer, Mr. Stokes Dewson.

MINOR.

Fees, 30*s.* per class, or 3*l.* 10*s.* for the whole.

Chemistry.—Mr. Stokes Dewson.

Botany and Materia Medica.—Mr. F. H. Alcock, F.C.S.

Pharmacy.—Mr. George E. Perry.

Arrangements will be made for the formation of a class for practical dispensing if a sufficient number of students be forthcoming.

MAJOR.

(Fee, 8*l.* 8*s.*)

Chemistry, Theoretical and Practical.—Mr. A. E. Robinson, F.C.S.

Botany and Materia Medica.—Mr. Stokes Dewson.

SHEFFIELD.

The Sheffield Pharmaceutical and Chemical Society announces the inauguration of a School of Pharmacy in October next. The session to extend from October to May. Lectures and classes in the evenings from 8.30 to 9.30, as follows:—Materia medica: Pharmacy, J. M. Furness, A.P.S.; fee, 7*s.* 6*d.* Botany, G. A. Grierson; fee, 7*s.* 6*d.* Chemistry and physics, T. Dobb, Ph.C.; fee, 7*s.* 6*d.* Practical chemistry, N. S. Smith, A.P.S.; fee, 10*s.* 6*d.* Compound fee for all the courses, 30*s.* Hon. Secretary, J. H. Bradwell, Eccleshall Road, Sheffield.

NEWCASTLE-ON-TYNE.

For particulars of proposed classes see C. & D., last month, page 42*E*. We understand that it is still doubtful whether the classes will be formed, the decision depending on the number of students who may offer themselves.

TULLY'S POSTAL SYSTEM.

Mr. JOHN TULLY, chemist, Tunbridge Wells, "Hill's Prizeman," established his postal system in 1872. It is divided into three classes. No. 1 is for the Preliminary, including all the subjects of the syllabus. If the student fail on first presenting himself, he is instructed for the next examination free of charge, providing he passes it within six months; fee 10*s.* 6*d.* No. 2 is for the Minor examination, for students under twenty years of age. It is intended to give direction to the studies, and to prevent the formation of an inattentive habit of reading. It includes fortnightly examination papers, and lectures which cover all the ground for the Minor and Major. Students can commence at any time. The fee is 1*l.* 1*s.* No. 3 is for the Minor, for students over twenty, and includes a full series of lectures. Fee, 1*l.* 1*s.*, payable in advance. A special course is organised for the Modified and Apothecaries' Hall examinations.

APOTHECARIES' ASSISTANTS' EXAMINATIONS.

Pharmaceutical students occasionally hear the Apothecaries' Society's examinations spoken of. The following details may be of interest:—

By sections 17 and 20 of the Apothecaries' Act of 1815 a penalty of 5*l.* is imposed on any person who acts as an assistant to any apothecary to compound and dispense medicines without having obtained a certificate of fitness and qualification from the Court of Examiners. By section 19 of the Act the fee for the assistants' certificate is fixed at 2*l.* 2*s.*

The only privilege conferred by the certificate is the power to act as assistant to apothecaries.

The following are the regulations of the Court of Examiners relating to assistants:—The Court of Examiners meet in the hall every Thursday, where candidates are required to attend at a quarter before five o'clock.

Every candidate intending to offer himself for examination must give seven days' notice previous to the day of examination, and must, at the same time, deposit the fee, 2*l.* 2*s.*, at the office of the beadle, where attendance is given every day, except Sunday, from ten to four o'clock; Saturdays, ten to two.

The examination of candidates for certificates of qualification to act as assistant, in compounding and dispensing medicines, will be as follows:—In translating physicians' prescriptions, in the British Pharmacopœia, in pharmacy, pharmaceutical chemistry, materia medica, and medical botany.

By the 22nd section of the Act of Parliament no rejected candidate can be re-examined as an assistant until the expiration of the three months.

In 1880 the following additional regulations were promulgated for the subject of botany:—

Candidates will be expected to display a competent knowledge of structural and physiological botany, such as may be obtained from lectures and from any elementary work.

They will be expected to describe and identify typical specimens, and to give the distinguishing characters of the following natural orders, viz.:—Compositæ, Convolvulacæ, Crucifera, Cucurbitacæ, Filices, Gentianacæ, Graminacæ, Labiata, Leguminosæ, Liliacæ, Melanthacæ, Papaveracæ, Ranunculacæ, Rosacæ, Rutacæ, Scrophulariacæ, Solanacæ, Umbellifera.

MEDICAL EDUCATION.

PRELIMINARY EXAMINATION.

Before entering on his career as a medical student the aspirant to medical honours must first pass one or other of the Preliminary examinations recognised by the Medical Council.

The recommendations of the General Medical Council, as far as relate to the Preliminary examination, and at present in force, are as follows:—No student should be admitted to his final examination till forty-five months have elapsed since his registration. No student can be registered before he has passed an examination conducted by one of a certain number of educational bodies in the following subjects:—(1) English language, including grammar and composition; * (2) English history; (3) modern geography; (4) Latin, including translation from the original and grammar; (5) elements of mathematics, comprising (a) arithmetic, including vulgar and decimal fractions; (b) algebra, including simple equations; (c) geometry, including the first two books of Euclid, or the subjects thereof; (6) elementary mechanics of solids and fluids, comprising the elements of statics, dynamics, and hydrostatics; † (7) one of the following optional subjects:—(a) Greek; (b) French; (c) German; (d) Italian; (e) any other modern language; (f) logic; (g) botany; (h) elementary chemistry.

Any of the following examinations fulfils the requirements:—

Oxford, Cambridge, and Durham.—Local examinations: Senior, including Latin and mathematics, or Junior, including Latin and mathematics, and one of the following optional subjects:—Greek, French, German, natural philosophy (including mechanics, hydrostatics, and pneumatics).

London (Matriculation Examination), Edinburgh, Aberdeen, Glasgow, and St. Andrew's.—Honours or Senior certificates granted under local examinations (to include English literature, arithmetic, algebra, geometry, Latin, and one of the following optional subjects:—Greek, French, German, natural philosophy).

Queen's University (Ireland).—Local examinations for men and women. Certificates to include all the subjects previously mentioned.

Royal College of Preceptors.—First-class certificate.

* The General Medical Council will not consider any examination in the English language sufficient that does not fully test the ability of the candidate:—(1) To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use.

† This subject may be passed either as preliminary, or before, or at the first professional examination.

A degree in arts from any British, and nearly any colonial, University is accepted in place of these examinations. Oxford Responsions and Moderations, and Cambridge Previous examination, and their equivalents at other Universities, are also accepted.

If neither of these has been undertaken, the student must pass one of the entrance examinations held by the medical licensing bodies.

Durham University.—Registration examination for medical students. Subjects—Rudiments of religion, literature, and science.

Aberdeen, Edinburgh, Glasgow, and St. Andrew's Universities.—Preliminary examination for graduation in medicine or surgery. Subjects—English, Latin, arithmetic, elementary mathematics and mechanics, and two, at least, of the following:—Greek, French, German, higher mathematics, natural philosophy, natural history, logic, moral philosophy. For further information apply to the secretaries of the Universities.

Society of Apothecaries, Blackfriars, London, E.C.—Held on the last Friday and Saturday in January and April, and the third in September. A form of application must be obtained and signed. Fee, 1*l.* 1*s.*, to be paid at least a week before the examination. For further information apply to the beadle.

Royal College of Physicians and Royal College of Surgeons, Edinburgh.—English grammar and composition, arithmetic to decimals, algebra to simple equations, Euclid, books I. and II., Latin, and one of the following:—Greek, French, German, natural philosophy. Fee, 10*s.*, to be paid not less than two days before the examination. For dates of examination, &c., apply to the officers of the Colleges.

Faculty of Physicians and Surgeons of Glasgow.—Preliminary examination, much like the above. Held in April, July, September, and October. For further information, apply to the clerk.

PROFESSIONAL EDUCATION.

Having passed his Preliminary examination the student should be entered at one of the hospital medical schools, and at once claim registration as a medical student. He cannot proceed to his final examination till he is twenty-one years of age. He is bound to spend something over three years, and more generally four years, in study at the hospitals, and unless he is abler than the majority of students he will require a longer period to fit him for the examinations. The latter are growing more and more severe and practical. It is said that only a tenth of the students now obtain their qualification within the four years. This being the case it is worth while to consider the advantage of entering the student for "perpetual admission" to the hospital lectures. The fee for this is only a trifle higher than is required for the minimum legal course, and much less than would be paid for extra sessions when failure to pass in the required time has made them necessary.

The minimum requirements of a medical practitioner before final qualification are certificates:—

1. Of having passed a Preliminary examination in arts recognised by "the General Medical Council" previous to entering on professional study.

2. Of registration in "the Medical Students' Register." (This Register is placed under the charge of the Branch Medical Registrars.)

3. Of medical study, after registration, of at least five years. ("The course of medical study after registration should occupy at least five years, if the subjects of elementary physics, chemistry, and biology are included in that period, or at least four years if a satisfactory examination in these subjects has been passed previous to registration.")

4. Of being twenty-one years of age, and of good moral character.

5. Of apprenticeship or pupillage to a qualified apothecary, or of having been engaged at practical pharmacy, under the supervision of a duly-registered medical practitioner, possessing the suitable means of instruction, for a period of twelve months subsequently to having passed the examination in arts.

6. Of having duly attended the following Courses, viz.:—

Materia Medica and Pharmacy	During Three Months
Botany and Zoology	Three "
Chemistry	Six "
Practical Chemistry (in a Laboratory,	Three "
Anatomy and Histology	Six "
Practical Anatomy with Dissections	Twelve "
Medicine (the Principles and Practice)	Six "
Surgery	Six "
Pathology	Three "
Midwifery and Diseases Peculiar to Women and Children	Six "
Practical Midwifery; attendance on at least twenty cases in a recognised Lying in Hospital. Instruction in Vaccination from a duly registered Medical Practitioner.	
Forensic Medicine	During Three Months
Mental Disease	"
Hygiene	One Course

7. Attendance on the practice of a recognised medico-surgical hospital or hospitals, with the clinical instruction, during at least four winter and three summer sessions.

8. Practical instruction, with care of patients, as apprentice, pupil, clinical clerk, or assistant in hospital or dispensary.

Students are not obliged to remain at the hospital more than three years, provided they have obtained the certificates of attendance upon lectures required by the respective licensing bodies. They must, however, in the event of leaving the hospital, be engaged during the fourth year in the acquisition of professional knowledge elsewhere.

Students should, however, be made aware that the loss of the fourth year of hospital study is strongly to be deprecated, since at that period the necessity for attending lectures has ceased, and their whole time can be spent in the study of disease in the wards of the hospital.

The usual order of study at the medical school is as follows:—

FIRST YEAR.

Winter Session.—Anatomy, Dissections, Physiology, Chemistry.

Summer Session.—Materia Medica, Botany, Practical Physiology, Practical Chemistry.

SECOND YEAR.

Winter Session.—Anatomy, Physiology, Dissections, Practical Surgery, Clinical Medicine, Clinical Surgery.

Summer Session.—Midwifery, Comparative Anatomy, Clinical Medicine Clinical Surgery.

N.B.—Students should defer further attendance on Lectures until they shall have passed the Second Examination of the Examining Board in England.

THIRD YEAR.

Winter Session.—Medicine, Surgery, Clinical Medicine, Clinical Surgery.

Summer Session.—Forensic Medicine, Pathological Anatomy, Clinical Medicine, Clinical Surgery.

In addition to the above, students are advised, during their first winter session, to attend the lectures on physics and natural philosophy; in their third or fourth summer session, to attend the extra course of practical and manipulative surgery, and the lectures on mental disease and on state medicine; and in the third or fourth winter the practical course of pathological anatomy, and the obstetric demonstrations. The course on diseases of the eye, and the teaching in the eye department, should be attended in the third and fourth years.

They are also strongly recommended to devote, during the whole period of their attendance at the hospital, as much time as they can spare from other engagements to clinical study in the wards and in the out-patients' rooms.

REGISTRABLE QUALIFICATIONS.

The following are the various qualifications recognised as registrable by the General Medical Council:—

Fellow, Member, Licentiate, Extra Licentiate, of the Royal College of Physicians of London.

Fellow, Member, Licentiate, of the Royal College of Physicians of Edinburgh.

Fellow, Licentiate, Licentiate in Midwifery, of the King and Queen's College of Physicians of Ireland.

Fellow, Member, Licentiate in Midwifery, of the Royal College of Surgeons of England.

Fellow, Licentiate, of the Royal College of Surgeons of Edinburgh.

Fellow, Licentiate, of the Faculty of Physicians and Surgeons of Glasgow.

Fellow, Licentiate, Licentiate in Midwifery, of the Royal College of Surgeons in Ireland.

Licentiate of the Apothecaries' Society, London.

Licentiate of the Apothecaries' Hall of Dublin.

Doctor of Medicine, Bachelor of Medicine, Licentiate in Medicine, of the University of Oxford.

Doctor of Medicine, Bachelor of Medicine, Licentiate in Medicine, Master in Surgery, of the University of Cambridge.

Doctor of Medicine, Bachelor of Medicine, Licentiate in Medicine, Master in Surgery, of the University of Durham.

Doctor of Medicine, Bachelor of Medicine, Bachelor of Surgery, Master in Surgery, of the University of London.

Doctor of Medicine, Bachelor of Medicine, Master in Surgery, of the University of Edinburgh.

Doctor of Medicine, Bachelor of Medicine, of the University and King's College, Aberdeen.

Doctor of Medicine, Bachelor of Medicine, of Marischal College and University, Aberdeen.

Doctor of Medicine, Bachelor of Medicine, Master in Surgery, of the University of Aberdeen.

Doctor of Medicine, Bachelor of Medicine, Master in Surgery, of the University of Glasgow.

Doctor of Medicine, Bachelor of Medicine, Master in Surgery, of the University of St. Andrews.

Doctor of Medicine, Bachelor of Medicine, Licentiate in Medicine, Master in Surgery, Bachelor in Surgery, Licentiate in Surgery, of the University of Dublin.

Doctor of Medicine, Master in Surgery, Licentiate in Surgery, of the Queen's University in Ireland.

Doctor of Medicine, Bachelor of Medicine, Master in Surgery, of the Royal University of Ireland.

The Royal College of Physicians of Edinburgh and the Royal College of Surgeons of Edinburgh unite with the Faculty of Physicians and Surgeons of Glasgow to give their triple qualifications after one curriculum and one set of examinations, and within the past year the Royal College of Physicians of London, and the Royal College of Surgeons of London, have worked on a similar plan.

The following are the minimum fees for certain of the examinations. More is incurred in case of failure.

Physicians and Surgeons, London.¹

(Combined diploma. Three examinations.)

Total fees £33 15 0

M.B. Lond.

(Exclusive of matriculation, which is the essential Preliminary. Three examinations.)

Total fees £15 0 0

M.D. Lond.

(One more examination.)

Extra fee £5 0 0

M.R.C.P. Lond.

Examination fee £6 6
Admission and licentiate 9 9 0

L.S.A. Lond.

Examination fees £3 6 0

M.R.C.P. Ed., M.R.C.S. Ed., Lic. Fac. Phys. Surg. Glasg.

(Three examinations.)

Total fees £25 5 0

M.B. Durham.			
Total fees ..	..	..	£16 0 0
M.B. Victoria University.			
Total fees ..	..	..	£8 0 0
M.B. & C.M. Univ. Ed.			
Total fees ..	..	..	£22 0 0
M.B. & C.M. Univ. Glasg.			
Total fees ..	..	..	£22 0 0
M.B. & C.M. Univ. St. And.			
Total fees ..	..	..	£21 0 0
M.B. Univ. Dublin.			
Total fees ..	..	..	£11 0 0
M.M. or M.Ch. Royal Univ. Irel.			
Total fees ..	..	..	£5 0 0
Lic. K. & Q. Coll. Phys. Ire.			
Total fees ..	..	..	£15 15 0
Apothecaries' Hall, Ireland.			
Total fees ..	..	..	£5 15 0

THE MEDICAL PROFESSION.

The remarks which follow give the substance of facts gathered from the secretary of one of the chief medical schools in England, whose position enables him to speak with authority. The conversation was carried on expressly with the idea of giving to chemists or their relatives information in regard to studying for the medical profession :—

In this, as in other professions, many students never qualify as practitioners. Of course, a student may enter at a Liverpool school, and, afterwards coming to London to complete his education, is liable to be counted twice, but the fact remains that a good many students never come to anything. The causes are various. Death accounts for more than would be suspected in the course of ten years. Others, becoming students before they know their own minds, and before they have thought out the plan of their lives, get disgusted, and turn to other things. Some have better openings offered to them in other directions. Recently a young Anglo-Indian, devoted to his profession, and not yet qualified, received a summons from his father :—"I have got you an appointment as medical officer on a plantation at 500*l.* a year. Come out at once, with what knowledge you have." To the student's regret he had to go. A certain number do not get on. They waste time, spend money, get into troubles of various kinds, and disappear from this country. New Zealand, Manitoba, and other distant parts of the world are favoured by their presence. Still others of this class go as unqualified assistants, and perhaps remain such all their lives. Others, again, have the moral courage to save sufficient money to come back and complete their education after even ten or fifteen years' interval. Hardly ten per cent., however, fail to qualify, and to obtain a respectable living. The character of the group of eighty or ninety students who enter a large hospital annually varies very much from year to year. Sometimes nearly every one qualifies within a reasonable time; the next year's batch may include a dozen young men who do no good for themselves or anybody else.

QUALIFICATIONS FOR SUCCESS.

The necessary qualifications for success at the examinations are moderate ability coupled with steady industry. Ultimate success in practice depends on these qualities, together with tact and judgment, natural or acquired. Kindness and gentleness to patients is taught, and can hardly fail to be learnt at the hospitals. A steady lad who does some amount of work every day will be almost sure to pass. To gain prizes and scholarships at the largest schools is a more difficult matter, and demands good ability. But some of the most able men do not care to try for these, and many are won by plodders, who accumulate a large number of facts, and are able to produce them at the right moment. At some of the smaller schools there are numbers of little scholarships that anyone can get. Sometimes when a man gets a

scholarship at the beginning of his career he gets such a reputation that no one will compete with him afterwards. There is a general impression among students that those who get scholarships fail in after life, but though the qualities that gain scholarships are not those that command success in practice, the rule is by no means a sound one.

Good health is a very necessary qualification. No one who is knocked up by a little overwork or extra anxiety should enter the medical profession. Sleep has to be lost night after night, anxious cases where the lives of important patients are in jeopardy will arise, and the strain is sometimes very severe. No one who at sixteen or seventeen has shown traces of a highly-anxious or excitable temperament should attempt to become a doctor. If there is a strong desire to enter the profession, even the want of robust health is not an absolute bar, for there are positions less exposed to fatigue and strain than others. In the country the practitioner may have to drive ten miles exposed to a cutting east wind, when a London practitioner travels in a comfortable carriage within the radius of a mile and a half. The latter never has any time that he can call his own, but is not so much exposed to the weather. Then a consultant's life, so far as regards external circumstances, exposure to weather, loss of sleep, and otherwise, is an easy one; but he has constant, severe, and uphill work to keep himself abreast of the science of the day. If a man chooses to make himself a specialist in eye or ear diseases, if there should be an opening for this, the bodily fatigue is almost nothing.

Primary education for a medical student might stop at sixteen. The profession itself, and its special studies, are all educational, and keep up the habit of mental work. It is, perhaps, not wise to interfere with or modify in any way the ordinary course of education up to that age, for it is difficult to know what branch could be safely left out, and what could be substituted for it with advantage. Greek is very useful. A difficulty in grasping the meaning of medical terms can be noticed in students who are ignorant of it. Chemistry and physics can be learned afterwards. If a student does not learn Greek at school he is not likely to learn it afterwards. There are abundant facilities for learning French and German, and chemistry and physics he is compelled to study.

COST.

The fees at Guy's Hospital are 137*l.* 10*s.* for a perpetual ticket, which gives free access to the full courses until the student is qualified, and afterwards if he chooses. The only extra class is that for practical pharmacy, so that 140*l.* covers this item of expense. Then, there are materials to be dissected, costing 12*s.* 6*d.* each "part." The student should dissect seven or eight of these. In practical chemistry there are some chemicals to pay for, and if operative surgery is taken up (it is likely to be made compulsory) two guineas must be paid for half a "subject," on which all sorts of operations will be performed. Ten pounds would cover these expenses.

Then for instruments, five or six guineas at the very least must be expended on a microscope, 25*s.* on a dissecting-case, 4*l.* or 5*l.* on a pocket-case, three or four thermometers will cost a sovereign; very many students need an ophthalmoscope, and the stethoscope, formerly a much cheaper article, must now be binocular, and cost 10*s.* to 15*s.* A set of bones, which may be second-hand or a sort of heirloom from one student to another, is a very valuable help, though they are provided at the large schools. These together would amount to not less than 20*l.*

The necessary books would cost about 3*l.* per annum. For the first year's winter session Gray's "Anatomy," Kirke's "Physiology," and Roscoe's "Chemistry"; for the summer session, Garrod's "Materia Medica," and some book on botany, practical chemistry, and physics; for the second year and afterwards, Ellis's treatise, and some text-book of surgery, medicine, and midwifery. Of course, this does not allow for any luxuries in the way of books, none of the three-volume novels of medicine, the systems of medicine and surgery, &c.; but the text-books are all that are really wanted.

For board and lodging 25*s.* a week is very low, and 30*s.* may be called the minimum if the student lives alone. If he rooms with another man he will save 5*s.* to 7*s.* a week. On 7*l.* a month a student is fairly well off; he ought to provide

himself with ties and gloves and things of that kind, but he must come to his father for broadcloth. Many get only 5*l*. a month, and plenty do it on less, living in cheaper rooms and feeding economically. For the first year the student will be at the hospital nine months; after that he will be there nearly all the time; the examinations and ward appointments fill up the vacations, and he must take his holidays when he can. A father expecting his son to be home three months in the year will be grievously disappointed.

THE NEW DOUBLE DIPLOMA.

Long ago, when both a medical degree and a surgical degree were first demanded, the Royal College of Physicians made no advance towards supplying the demand that thus arose. The Society of Apothecaries stepped in, and their licence with that of the Royal College of Surgeons became the popular qualifications for the general practitioner. The licence of the Royal College of Physicians has been taken by very few. Quite recently the Royal College of Physicians and the Royal College of Surgeons have come to an arrangement by which the licence of both bodies is granted to those who pass a single set of examinations. Students will now take both qualifications or none. The amalgamation simplifies the work of students; much of the preliminary study is the same for both examinations, and the student becomes doubly diplomaed and connected with both colleges for the fee of 35*l*. Formerly the fee for the one qualification was fifteen guineas, for the other twenty-two guineas.

The qualifications to be recommended to the ordinary student would now probably be this double diploma. But for a "strong" man the degree of the London University. This requires a longer course of study, as nothing counts before the Preliminary Scientific Examination.

The new diploma can be taken in seven examinations, that is, the first and second examinations proper can be taken in two parts each, and the final in three parts. This makes it easier for students, but it has this disadvantage—that students will now ask to be taught their subjects in six months.

For a consultant the M.R.C.P. or F.R.C.S. is requisite. No one is at all likely to endeavour to become a consulting physician or surgeon without a hospital connection, that is, without some high appointment in connection with a well-known hospital. For this he must have one of the qualifications named. No one takes the M.R.C.P. unless he intends to become a consultant, for he cannot take a partner nor dispense his own medicines.

THE TIME REQUIRED

For study is fixed at four years, but it must be understood that this is the limit for clever students. It would be unjust to the stronger men to compel them to remain as students longer than necessary. Five years is the more usual average length of study. For the London University degree the period is six years from the date of matriculation. It can be done in five long years, but this is the minimum.

We would strongly advise no one to take an assistantship, with a view of saving part of the expense. Some do this. Some students act as assistants to medical men in the neighbourhood, and some remain in business as chemists throughout their curriculum; but they would do better to live on bread and cheese all the week, with a sheep's head on Sundays, and so save their liberty. The student should be about the hospitals at all times to see whatever turns up. He will be getting ward appointments, and ought to be in his ward making notes in the morning, and accompanying the physician in the afternoon. If he has appointments to keep with his master these advantages are hindered. Then, when an examination is coming on, and he ought to be thoroughly fit, he may be sent out to a midwifery case, and kept up one or two nights, thus ensuring failure. Students have earned part of the cost of their training, but it has always been at a great disadvantage in other respects.

THE PROSPECTS IN THE MEDICAL PROFESSION

seem little better than in most other occupations, and the general impression is that the profession is overstocked. But, with care, patience, and tact, an opening can always be found. Once qualified a fairly good position is secured, if a man does not marry too early and get burdened with a large family. A large proportion of the students who qualify join

their fathers and succeed to the practices. A certain number become house surgeons at provincial hospitals for a year or two. They get board and lodging (as bachelors of course), and 80*l*. to 100*l*. a year. If they get any local influence they may set up in the neighbourhood. Others who can command 500*l*. to 1,000*l*. buy a share in a practice, or one vacated by death or change of residence. Others become assistants. Qualified assistants are little wanted in London; but there are many in the provinces. They get about 100*l*. a year in the house, and 150*l*. to 200*l*. out. They may remain in this position four or five years, till they become partners or find means to start for themselves. Others again find what they consider an unoccupied corner of the suburbs, put up a brass plate and—wait. If a man has not some capital after his education is paid for he will have a hard time. Even if successful at once his receipts will not come in for at least six months, and he has residence and drugs to provide for meanwhile. Nevertheless, apart from bad character, a qualified man rarely fails to make a fair living.

Chemists' assistants are in a decidedly advantageous position for taking up the profession. Although we should not recommend anyone to become an assistant as part of his medical training, yet there is not the least doubt that hardly any part of the pharmaceutical education is thrown away.

MEDICAL SCHOOLS.

The Middlesex Hospital Medical School.—310 beds. Fees, 94*l*. 10*s*. For dental surgery, 42*l*.

St. Mary's Hospital, Cambridge Place, Paddington, W.—190 beds. Perpetual. Fee, 119 guineas in advance; for dental students, 55 guineas.

St. Thomas' Hospital Medical School, Albert Embankment, Westminster Bridge.—572 beds. Perpetual fee, 125*l*.

University College Hospital, Gower Street, London. Faculty of Medicine.—Composition fee, 125 guineas, or 130 guineas in instalments.

King's College, Strand, London, W.C.—Medical department; 170 beds in hospital. Fee, 126*l*. 11*s*. 6*d*.]

St. Bartholomew's Hospital, West Smithfield, E.C.—710 beds. Fees for perpetual attendance on lectures and hospital practice, 136*l*. 10*s*., or 131*l*. 5*s*. in advance.

Charing Cross Hospital.—180 beds. Fees for matriculated students (students who enter for their whole course at the hospital), 99*l*. 15*s*.

St. George's Hospital, Hyde Park Corner, S.W.—351 beds. Fee for the whole course, 125*l*.

Guy's Hospital, St. Thomas's Street, Borough, S.E.—695 beds. Fee, 131*l*. 5*s*.

London Hospital, Mile End, E.—800 beds. Fees, 94*l*. 10*s*. in advance.

Westminster Hospital.—215 beds. Fee, 100*l*.

London School of Medicine for Women, Henrietta Street, Brunswick Square.—Established to provide complete medical education for women who intend to practise, and for those who desire a thorough medical knowledge without intending to practise. Its classes are recognised by the University of London and the King and Queen's College of Physicians of Ireland. Fee for lectures, 80*l*.; for hospital practice (at the Royal Free Hospital, Gray's Inn Road), 20*l*. the first year, 15*l*. each succeeding year, or 45*l*. in advance, or a perpetual ticket for a further fee of 6 guineas. Dean, Mrs. Garrett Anderson, M.D.

The West London Hospital, Hammersmith.—Gives instruction in natural science and in the rudiments of medical and surgical subjects, so that the student may be prepared to take an intelligent interest in hospital practice.

The scheme of instruction for the year includes materia medica and pharmacy, osteology, physics, chemistry, and botany, which are taught thoroughly; and elementary medicine, elementary surgery, and elementary physiology and histology. The fee for the complete course, including one year's hospital practice, is 26*l*. 5*s*.

Queen's College, Birmingham. Faculty of Medicine.—This college is now associated with the Mason's Science College. Composition fee, 100*l*. Students are admitted to two hospitals with 400 beds. There is a dental school here.

Victoria University (the Owens College), Manchester.—Composition fee of 63*l*. Hospital practice at the Royal Infirmary, with 298 beds; composition fee, 42*l*.

University of Durham College of Medicine, Newcastle-on-Tyne.—Composition fees, 60 guineas, or 70 and 75 guineas in instalments.

Bristol Medical School: Affiliated to University College, Bristol.—Composition fee, 63*l*. for the college, and for hospital medical and surgical practice, 36*l*. 15*s*. The Bristol Royal Infirmary contains 264, and the General Hospital 154, beds.

Leeds School of Medicine (now affiliated to the Yorkshire College).—Composition fee, for lectures, 50*l*. 8*s*.; for medical and surgical practice at the Leeds General Infirmary (300 beds), perpetual, 42*l*.

University College, Liverpool, Medical Department, formerly the Royal Infirmary School of Medicine.—300 beds. The perpetual hospital fee is 42*l*.; the composition fee for lectures is 63*l*. Extras, about 10*l*. 10*s*.

Sheffield School of Medicine.—Perpetual fee for lectures, 45*l*. Hospital practice may be attended either at the General Infirmary (180 beds), or the Public Hospital and Dispensary (110 beds). Perpetual fee in each case, 36*l*. 15*s*.

School of Medicine, Edinburgh.—Fee for study required for a double qualification, 95*l*., including fee for examination.

University of Glasgow Medical School.—Total minimum expenses for M.B. and C.M., 90*l*.

The Glasgow Royal Infirmary.—Fees for the whole course, 48*l*.

Carmichael College of Medicine and Surgery, Aungier Street, Dublin.—This is connected with the following hospitals:—The Adelaide, City of Dublin, Cork Street (Fever), House of Industry, Meath, and Mercer's. Fee for the full course of lectures for the Royal College of Surgeons, Ireland, 58*l*. 5*s*. 6*d*.

Dr. Steeven's Hospital and Medical College, Dublin.—The hospital contains 250 beds. Composition fee for the medical school, 5*l*. 3*s*. 6*d*.; fee for hospital, 12*l*. 12*s*. for nine months.

Catholic University of Ireland. School of Medicine. Cecilia Street, Dame Street, Dublin.—Perpetual fee for lectures, 56*l*. 17*s*. 6*d*.

New Carmichael College of Medicine and Surgery, Aungier Street, Dublin.—For particulars apply to the Registrar, Dr. Harvey, Upper Merrion Street, Dublin.

Queen's College, Galway. Faculty of Medicine.—Minimum fee for the degree of M.D., 39*l*. 5*s*. Hospital practice must be obtained elsewhere.

Queen's College, Cork.—Fees for lectures and hospital practice, about 47*l*.

THE HOMŒOPATHIC SYSTEM OF MEDICINE.

At the London Homœopathic Hospital a course of instruction is provided homœopathic practice which is intended for qualified medical men, as well as for medical students. The course includes hospital practice and clinical lectures, by Dr. J. Galley Blackley and Dr. J. H. Clarke; lectures materia medica, by Dr. J. H. Clarke; and on the practice of medicine, Dr. Dyce Brown. Composition fee for the entire course, 10*l*. 10*s*.; or each section may be taken separately. The session will be opened on October 5, at 5 P.M., when Dr. Dyce Brown will deliver the annual Gneismannian oration.

THE DENTAL PROFESSION.

The Dentists Act, 1878, provides that only persons who are registered under the Act shall be allowed to call themselves dentists, or in any way to lead the public to suppose that they are registered dentists, or to recover fees for dental operations in the legal courts, under a penalty of 20*l*.

It should be noted that the practice of dental operations is not forbidden. The notice "Teeth Extracted" will not incur a penalty so long as no title is assumed which would lead the public to suppose that the person is registered. But if credit is given for such operations, the debtor might repudiate the debt, and the creditor would have no remedy against him.

Persons who obtained registration under the Act as having been previously engaged in practice as dentists can obtain the degree of L.D.S. without a curriculum from the Edinburgh and Dublin Colleges of Surgeons. The examinations

are practical, and at each college the fee is 10*l*. 10*s*. At Dublin candidates are required to lodge with the Registrar for at least three weeks previous to examination, and before obtaining a certificate must declare that they will not advertise or pursue any other unbecoming mode of attracting business.

Most of the medical schools offer the special courses necessary for dental students. There are besides many special schools, of which the following may be named:—

Dental Hospital of London and School of Medicine, Leicester Square.—Total fee, 31*l*. 10*s*.

National Dental Hospital and College, 149 Great Portland Street, W.—Total fee, 25*l*. 4*s*.

Edinburgh Dental Hospital and School.—The hospital is in 30 Chamber Street. Fees, for two years' hospital practice, 15*l*. 15*s*.; lectures, 9*l*. 15*s*.; total, 25*l*. 10*s*.

Dental Hospital of Glasgow, Anderson's College.—Fee for two years' practice, 10*l*. 10*s*.; lectures, 2*l*. 2*s*. a course; total for whole curriculum, 42*l*. 10*s*. 6*d*.

Queen's College, Birmingham, and Birmingham Dental Hospital.—Fee, 78*l*. 15*s*. for the full curriculum required for the dental diploma, including hospital practice.

Manchester Dental Hospital.—Fees for the dental part of curriculum, 25*l*. 4*s*.; for the general subjects at Owens College, 60*l*. 14*s*. 6*d*. This school has only just been established.

University College, Liverpool, and Liverpool Dental Hospital.—Fee for the lectures and full hospital practice required for L.D.S., 77*l*. 14*s*.

Registration can now be obtained only after curriculum and examination. The chemical student must pass a preliminary examination, obtain instruction in mechanical dentistry from a registered practitioner, as apprentice, or in some other way, for a period of not less than three years; attend lectures and hospital-practice at a general hospital and medical school for one summer and two winter sessions, and at a dental hospital and school for two years. The attendance at the general medical and at the dental hospitals and schools may go on simultaneously. Candidates for registration as licentiates must have spent four years in professional study from the date of registration as a student. One of the three years that must be given to mechanical dentistry may be reckoned in this period. The three years' instruction in mechanical dentistry, or any part of them, may be taken either before or after registration as a student, but only one year (which must be after registration) can be counted as one of the four years of professional study.

VETERINARY EDUCATION.

By the Veterinary Surgeons Act, 1881, no persons may describe themselves as "veterinary surgeons," unless they are on the Register of Veterinary Surgeons. The register of members of the Royal College of Veterinary Surgeons is constituted the official register.

The Royal College of Veterinary Surgeons grants the titles of "members" and "fellows." Candidates for membership must have gone through a three years' course at one of the veterinary colleges mentioned below, and pass three examinations (fee in each case 3*l*. 3*s*.). If the candidate is successful, he is registered as a member—M.R.C.V.S.; registration fee, 1*l*. 1*s*.

The candidate for fellowship must produce a certificate signed by three fellows as to his status in the profession, and of his having been in practice not less than five years; he must undergo an oral and written examination; fee on election, 15*l*. 15*s*.

ROYAL (DICK'S) VETERINARY COLLEGE,

Clyde Street, Edinburgh.

The winter session commences October 26, and the Preliminary examination is held on October 26 and 27. The classes are open to amateurs. Principal, Professor Thomas Walley, M.R.C.V.S.

GLASGOW VETERINARY COLLEGE,

83 and 85 Buccleuch Street, Glasgow.

Preliminary examinations or certificates of elementary proficiency are required from candidates. Shortest course of study two and a half years; two sessions per year. Matriculation fee, 15s.; education fee, 38 guineas. Principal, Professor James McCall.

THE NEW VETERINARY COLLEGE,

Leith Walk, Edinburgh.

Students have either to present a certificate of proficiency in elementary subjects or pass a preliminary examination. Fees for seven terms, 36 guineas; extra years, 5l. Principal, Professor Williams, F.R.S.E., &c. Staff of Professors, James Hunter, Ivison Macadam, A. N. M'Alpine, Lewis, and W. O. Williams.

THE ROYAL VETERINARY COLLEGE,

Great College Street, Camden Town, N.

Students are admitted without a matriculation examination, provided. certificates can be produced from one of seven colleges. Candidates who cannot present such a certificate must pass a preliminary examination. Matriculation fee, 1 guinea; education fee, 36 guineas, with 1 guinea extra for the library; extra years beyond the prescribed course, 5 guineas. The courses are divided into several branches, and there are three terms each year. Principal, W. Robertson, F.R.C.V.S. Professors: R. V. Tuson, chemistry; G. T. Brown, cattle pathology; J. W. Axc, histology and morbid anatomy; Dr. Colbold, helminthology.

VARIOUS SCIENTIFIC SCHOOLS.

CITY AND GUILDS OF LONDON INSTITUTE FOR THE
ADVANCEMENT OF TECHNICAL EDUCATION,

Leonard Street, Finsbury.

Students of either sex are admitted, and classes are held both in the daytime and in the evening. The day-class instruction covers:—(1) Mechanical engineering and applied mathematics—Professor J. Perry; (2) applied physics and electrical engineering—Professor Silvanus P. Thomson; (3) chemistry—Professor R. Meldola; (4) applied arts—A. F. Brophy, head-master; (5) French language—teacher, M. Esclançon; and German—Herr Beyer. The sessional fees are 9l., if paid down in advance, or 10l. if paid in three instalments. The evening classes cover the same subjects as the day classes, with additions in the applied arts division, and also of special trade classes, in which last named skilled artisans give instruction.

The fees range from 6s. to 12s. 6d. per class per session, or 3s. 6d. to 6s. per term.

The central institution is conducted at Exhibition Road, S.W., where there are four departments:—(1) Mechanics and mathematics; (2) engineering; (3) physics; (4) chemistry, wherein students are prepared for (a) technical teachers; (b) mechanical, civil, electrical, chemical, and sanitary engineers and architects, builders and decorative artists; and (c) principals, superintendents, and managers of manufacturing works. For the whole course a matriculation examination is necessary. Fees, 30l. per annum; in separate courses, from 10l. to 30l.

Principal of the Institution—Professor Silvanus P. Thomson.

UNIVERSITY COLLEGE,

London, W.C.

At this college students are prepared for graduation in arts, science, laws, and medicine, qualifying for the diplomas of the College of Physicians and the College of Surgeons, with special provision of training in architecture, fine arts, mechanical and civil engineering, electrical engineering, of chemical technologists and consulting chemists qualifying for the diploma of the Institute of Chemistry. No entrance examination is necessary. Students can attend a single class without being required to attend other classes. Female students are admitted under certain conditions and upon appropriate introductions. Dean of the Faculty of Arts and Laws—Professor the Rev. A. J. Church, M.A.; and Dean of the Faculty of Science—Professor Charles Graham, D.Sc.

The fees vary with many of the subjects, and range from 1l. 1s. upwards.

THE MASON SCIENCE COLLEGE.

Both day and evening classes are carried on at this college, and the subjects comprise:—In the faculty of arts—Greek, Latin, and the English, French, and German languages and literatures; in the faculty of science—

(1) mathematics, (2) physics, (3) chemistry and metallurgy, (4 and 5) general biology, (4) zoology and comparative anatomy, (5) botany and vegetable physiology, (6) physiology, (7) geology and physiography, (8) mining, (9) civil and mechanical engineering. There are also special evening classes for teachers. The fees range from 3l. 3s. to 4l. 4s. per session of three terms for the day classes, but for the evening classes there is a generally uniform fee of 10s.

President of the Council—J. Thackray Bunce, Esq., F.S.S., J.P., who has the assistance of fifteen professors and their respective staff.

THE NORMAL SCHOOL OF SCIENCE AND ROYAL SCHOOL
OF MINES,

South Kensington and Jermyn Street.

The object of this school, which is State supported, is primarily for the instruction of teachers and of students of the industrial classes, selected by competition. Other students are also admitted, if accommodation allows, upon payment of certain fees, which are high. The subjects are: (1) the classics, (2) physics, (3) chemistry, (4) biology, (5) geology, (6) agriculture, (7) metallurgy, and (8) mining. Dean, Professor Huxley who is also Professor of Biology. The other professors are: Mining, W. W. Smyth; chemistry, T. E. Thorp; mechanics and mathematics, T. M. Goodene; physics, F. Guthrie; geology, J. W. Judd; metallurgy, W. C. Roberts; lectures on astronomy, J. N. Lockyer, and on agriculture, J. Wrightson; with a staff of assistants for each subject.

THE CITY OF LONDON COLLEGE.

At this college instruction is offered in the languages, arts, and sciences. The list of classes, all held in the evening, includes languages as far as Hindustani and Dutch, writing, shorthand, music, as well as the sciences, and bookkeeping. The fees vary from 4s. 6d. to 9s. a term, according to the subject.

THE SALFORD WORKING MEN'S COLLEGE,

Great George Street, Salford,

Provides evening classes in chemistry, at 2s. 6d. a term for the theoretical classes, 5s. a term for the practical classes. Also a technical class in calico and linen bleaching, printing, and dyeing; fee, 3s. 6d.

VICTORIA UNIVERSITY (THE OWENS COLLEGE),

Manchester.

The subject list of this university is of a most comprehensive character each subject being in the charge of an eminent professor and a staff of assistants. There are three terms, commencing with Michaelmas term in each year. The fees vary with each course of instruction, but for the preparatory to the medical course the entrance examination in arts is from 18l. to 19l., and for the preliminary in science course 26l. 1s. 6d. Principal J. G. Greenwood, Esq., LL.D.

THE ROYAL AGRICULTURAL COLLEGE,

Cirencester.

At this college is taught the science of agriculture and the various sciences in connection therewith, and the practical application thereof in the cultivation of the soil and the rearing and management of stock. In-students and out-students are admitted. The ordinary course of tuition covers two years in six sessions, but for the diploma a seventh session is necessary.

The studies include: (1) Practical agriculture and rural economy (2) estate management, with the elements of forestry, agricultural law, building, &c.; (3) bookkeeping; (4) chemistry, general and agricultural; (5) natural history, geology, physical geography, biology, botany, zoology (6) physics and mechanics; (7) mensuration; (8) land-surveying and estate engineering; (9) veterinary science and practice; (10) architecture and mechanical farm drawing; (11) lathe, carpentry, and wheelwright work, smith work, saddlery, &c.; (12) garden work. Principal, Rev. J. McLellan, M.A., assisted by Professors Little and Wallace in practical agriculture and rural economy. Mr. Russell Swannick is the managing director of the College Farm; Prof. Kinch, with two assistants, has charge of the chemistry division; Prof. Harker of geology, &c.; Prof. Ohm, mechanics and physics; Prof. Thomson, land surveying and estate engineering; Prof. Garside, the veterinary department; Prof. Thomson, bookkeeping; Prof. N. M. Fawcett, agricultural law; Prof. Waller, construction; P. Elliot, estate management; Mr. J. Miller, architectural and mechanical drawing. As honorary professors there are Professors G. Brown, Coleman and Gilbert.

TRADE-MARKS APPLIED FOR.

THE Trade Marks Journal publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications relating to patents, designs, or trade marks to be addressed to H. Reader Lack, Esq., Comptroller-General of Patents Designs, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "Trade Marks Journal," August 19, 1885.

FERRIS PERFECT CLINICAL THERMOMETER, for a clinical thermometer, Ferris, Boorne, Townsend & Boucher, Union Street, Bristol. No. 44,827.

PECTIN, an aperient marmalade, for a vegetable jelly, or compound of fruits, having medicinal properties. William Woodward, Goldsmith Street, Nottingham. No. 45,223.

EAGLE WITH A SHIELD, for combs not made of metal, for the hair. R. Hovenden & Sons, 31 and 33 Berners Street, W. No. 45,374.

A POUTER PIGEON, for substances and preparations for feeding pigeons; the firm trading as "Spratts Patent," Henry Street, Tooley Street, Southwark. No. 45,476.

A DEAD BEETLE, a burning substance, and an imp dancing over the insect, for an insecticide. James Rowland Ward, trading as "Rowland Ward & Co.," 166 Piccadilly. No. 45,480.

Picture of a Castle on a Shield, with the words "Castle Mineral-water Factories, Shrewsbury and Ludlow," for mineral water, natural and artificial, including ginger-beer. Thomas Southam & Sons, Shrewsbury and Ludlow. No. 45,521.

A Circular Label, top part in black, with white stripe, and bottom part in white. Letters on black part in white, and on white part in black; the words "B2 female pills, one 3 or 4 times a day; signature, J. J. Horton, Chemist, M.P.S. Corner of Stoney Lane, Stratford Road, Birmingham," for female pills. J. J. Horton, Sparbrook, Birmingham. No. 45,516.

HAIRINE in large letters, with the words underneath, "an internal medicine for the hair," for a medicine for internal use for man. Edgar Rowbotham, 1 Cecil Street, Strand, London. No. 45,680.

KURAL, a medicine for human use. Charles Jones, Royton, Lancashire. No. 45,717.

A Magnet, bearing the word "Beattalmagnetic" washing-paste, starch gloss, and soft soap. Jonson, Pickover & Co., 1A Ashfield Road, Burnley, Lancashire. No. 45,810.

A Plain Label, with a number of words, commencing "Something new, Clarke's Whitty Jet Marking Ink," finishing with the signature "John F. Clarke," for marking-ink. John Thomas Clarke, 78 Faulkner Street, Manchester. No. 45,823.

An Oblong Label bearing the words "J. Wyld's Canadian Baking-powder," the word "Canadian" in white letters on black ground from left-hand to right-hand corner, for baking and egg powder. James Wyld, trading as "James Wyld & Co.," Avon Street, St. Philips', Bristol. No. 45,924.

A Triangle with extended points, with a globe with three rings round it, and circle in the middle of the triangle; the words "Manufacturing, Pharmaceutical, Analytical" on the triangle, and the letters A. H. J. round the globe, and an ornamental H on the rings of the globe, for chemical use for manufacturing purposes by calico-printers, dyers, chemists, &c., including acids and salts. Alfred Heinrich Jackson, Sandy Lane Chemical Works, Clayton, Manchester. No. 45,925.

Bar with a band round it and circle on the band, with the words "Gott Mitnus," with a wreath underneath and a crown in the centre, for pomade or grease for polishing metal of any description. Carl August Ernst Friedrich, 101 Prutzen-Strasse, Berlin. No. 45,984.

Five Diamonds, with blank in between each one, with the letters "C. A. W. Co. Lm.," for mineral waters (natural and artificial), including ginger-beer. The Central Tea and Coffee Houses Company (Lim.), 60 Royal Exchange, Manchester, and elsewhere. No. 46,095.

Picture of a semi-circular Laboratory, with cherubs working, and the words "Vitalising Saline," for a medicine for human use. Thomas Hunter Dodd, 27 Herrington Street, Sunderland. No. 46,102.

CIBELS, for a fluid extract of beef. Andrew Moore, 47 Ann Street, Belfast. No. 46,119.

ALIAS, with the figure 4 beneath the word, for glass bottles. Dan Rylands, Hope Glassworks, Barnsley. No. 46,167.

ACME, for brushes for personal use. Reginald Blackwell Broidenbach, 157B New Bond Street, London. No. 46,170.

Joss, in thick black letters, for a fire-extinguishing powder. L. Buchbinder & Co., 24 Colebrooke Row, Islington, N. No. 46,224.

Picture of a Castle on a Rock, with the words "Castle Brand" on the top of the picture, and "For the breakfast and luncheon table" below, and side label. Prepared by Underwood & Co., London, &c., for preserved meats and extracts of meats. Underwood & Co., Crown Works, Dalgleish Street, Limehouse. No. 46,259.

Elliptical label, bearing the words "West Surrey Mineral-water Works, Godalming," with a central monogram, for mineral water (natural and artificial), including ginger-beer. Henry Mitchelson, Godalming. No. 46,278.

NIGERINE, for a blacking compound or material. Staton & Cooper, 7 and 8 Cheapside, Derby. No. 46,302.

CARBOLINEUM AVENARIUS, for a compound or anti corrosive for preserving wood. Peters Bartsch & Co., City Road Mills, Derby. No. 46,303.

GLICKON'S SALVE, for a salve for human use. W. Locking & Son, Hull, Yorkshire. No. 46,352.

Two bares coursing a field, with the word "Nonpareil" below, for a preparation for the hair. G. W. Beckett Chase, 4 Sutherland Gardens, Harrow Road, W. No. 46,354.

OLIA DEELINE, for medicine for human use for the cure of skin diseases. The Dec Oil Company, Salford, Chester. No. 46,378.

From the "Trade Marks Journal," August 26, 1885.

APOLLINARISBRUNNEN: VORMALS GEORG KREUZBERG, &c., with oriental characters in lower part of label, in three different styles, with black triangle, black diamond, and diamond top half black and lower half white, for mineral waters, natural and artificial. The Apollinaris Company (Limited), 19 Regent Street, W. Nos. 45,218, 45,219, 44,220, 44,221, 44,222, 44,223.

FRIEDRICHSHALL, HUNYADI JANOS, APOLLINARIS, for a chemical substance prepared for use in medicine and pharmacy. The Apollinaris Company (Limited). Nos. respectively 45,589, 45,590, 45,591.

NATURLICHES FRIEDRICHSHALLER BITTERWASSER and label in German; **NATURAL FRIEDRICHSHALL BITTER WATER** and label in English. The Apollinaris Company (Limited). Nos. respectively 45,699, 45,700.

The words "American Forecast Barometer," arranged in segment form with additional words at each end, and surmounted by the signature "Joseph Davis & Co., Barometers," Isaac Davis, trading as "Joseph Davis & Co.," 6 Keunington Park Road, London, S.E. No. 44,916.

THE KING'S SOAP, for household or domestic soap, included in Class 47; **THE KING'S SOAP**, fancy soap (perfumed). Hodgson & Simpson, Calder Soapworks, Wakefield. Nos. respectively 45,439 and 45,441.

Pictorial representation of Mount Etua on label, with design, and the words "Essence of Lemon, the Finest Quality Procurable," placed at an obtuse angle; "Essence of Lemon," for use as food. Hirst, Brooke & Hirst, Leeds. No. 45,611.

Oil-glass and Test-tube, with crest and motto, "Lubricating and Cylinder Oils." Thomas Holms, trading as "Thomas Moseross & Co." 1 and 3 Folds Road, Bolton. No. 45,639.

YORKSHIRE LINIMENT, a liniment for human use. The firm trading as "J. F. White," 17 Vicar Lane, Leeds. No. 45,879.

SCROLL AND CIRCLE, with design and the words "Alta Pete," for all descriptions of substances used as food or as ingredients in food included in Class 42. Thompson, Millard & Co. (Limited), Curtain Road, Great Eastern Street, London. No. 46,356.

Head of a human figure printed over with certain words, and a label with special design both for a medicated article, medicine, or remedy for the cure of catarrh, hay fever, cold in the head, and other complaints. Ely Brothers, Oswego, New York, U.S.A. No. 46,411.

AMBERLINE, printed over a representation of rocks rising out of water, with the words between "Out of the earth is the fulness," For petroleum jelly, for use as a toilet article and for the hair. Lewis Matthew Becker, trading as "Becker & Co.," 31 Glasshouse Yard, Aldersgate Street, E.C. No. 46,454.

From the "Trade Marks Journal," September 2, 1885

A square label, with the words "Absolutely Pure Meat Juice, the Germ of Life," &c., with address and signature, "London Manufacturing Company," written across, for meat juice for use as a food. The London Manufacturing Company, 59 to 61 Hatton Garden, E.C. No. 45,768.

CRYPTON, for a dentifrice. Thomas Hargreaves, 5 Grosvenor Street, Piccadilly, Manchester. No. 45,827.

CEROLINE, for a medicine for human use. Christopher Fawcett, 5 Howden Grove, Leeds. No. 45,876.

ODONTORAPH, in white letters on a black ground, for tooth-paste, tooth-powder, and tooth-wash (No. 45,019); also same word and design for tooth-brushes (No. 46,020). The Odontoraph Company, 22 Cannon Street, Birmingham.

Design, with female figure at the bath, and the words "The Beautiful Bather Toilet Soap," for toilet soap. James Blackwood, trading as "J. Blackwood, Couror & Co.," 11 and 12 Great Tower Street, London, E.C. No. 46,031.

COSMOPOLITAN GLYCERINE SOAP, for perfumed glycerine soap. Gustav Boehm, 35 Charles Street, City Road, London, E.C., and Offenbach-on-Main, Germany. No. 46,049.

WM. SCHWEITZER'S DANDELION OR TARAXACUM COFFEE, with signature below, for dandelion or taraxacum coffee, a chemical substance, prepared for use in medicine and pharmacy (No. 46,099); also same words and signature for dandelion or taraxacum coffee, a substance used as food, or as an ingredient in food (No. 46,100); both used by applicants and predecessors in business for upwards of three years before August 13, 1875. Thompson, Millard & Co. (Limited), Curtain Road, Great Eastern Street, London, E.C.

A Stag's Head, mounted, with the words "Horn Rubber" arranged over it, for horn rubber (for dental purposes). Alexander Jamieson, trading as "W. & J. Jamieson," 10 Broad Street, Golden Square, London, N. No. 46,364.

AMROLINE, for toilet-cream, hair-restorer, dentifrice, and toilet articles generally. A. P. Towles & Son, 75 Back Piccadilly, Manchester. No. 46,664.

From the "Trade Marks Journal," September 9, 1885.

Three medicine bottles placed one across the other in triangular shape, for a medicine for human use (No. 44,901). William Fletcher, 567 Ellesmere Street, Runcorn.

OLD PARR'S INDIAN PAD perfected for medicated pads (No. 45,119). Kennedy & Co., Pittsburg, Pa., U.S.A.

Pictorial sketch of chemist in laboratory, with words beneath in white on black ground, "Howell's Golden Herb Pills," for pills for man (No. 45,860). Mrs. Elizabeth Howell, 62 Devonshire Street, Higher Broughton, Manchester.

An ornamental anchor, with the word "Gamjee" beneath it, for medicinal salves and pills, and other botanical preparations for human use. Charles Maggs, 13 Wind Street, Swansea.

Decorative label, bearing the words "The Improved Diamond Baking Powder," with monogram, for baking powder (No. 46,365). Robert Fisher, St. George's Bridge Street, Norwich.

Miscellaneous Formulae.

ALIMENTARY SOLUTION FOR PLANTS.—

Potassium nitrate	10 grammes
Calcium carbonate	5 "
Sodium chlorate	5 "
Calcium phosphate	5 "
Sodium silicate	5 "
Ferrous sulphate	1.5 "
Water	100 litres

Am. Journ. Pharm.

WHOOPIING-COUGH MIXTURE.—Dr. A. Platt has found the following mixture answer:—

Copaiba	3ss.
Balsam. tolt.	3ss.
Pulv. acacie	3ss.
Aquæ	3iv.
Acid sulphuric aromat	xx gtt.

Mix the acacia with the balsams, and gradually add the acidulated water.

Dose, a teaspoonful when required, three, four, or five times a day.—*New. Eng. Med. Monthly.*

TO WHITEN THE NAILS.—

Acid sulph. dil.	2 drachms
Tinct. myrrh	1 "
Aq. dest., or spring water	4 oz.

M.

First clean with white soap, and then dip the fingers into the mixture.

TO WHITEN THE HANDS.—

Eau de Cologne	Oz.
Lemon juice	2
Pow. B. Windsor soap	6

Mix well.

When hard it will be an excellent soap for whitening the hands.

TO IMPROVE GILDING.—

Powd. alum	Oz.
Common salt	1
Powd. nitre	2
Aq. dest.	4

This much improves the colour of gilt articles. To be used with a soft brush.

TO TAKE MILDEW OUT OF LINEN.—Rub the linen with fine soap; then scrape some fine chalk, and rub it also on the linen. Lay it on the grass as it dries, wet it a little, and it will come out in twice doing.

BLACKING FOR DRESS-BOOTS, &C.—

Gum arabic	Oz.
Treacle	2
Ink	8
Vinegar	2
S.V.R.	2

Dissolve the gum and treacle in the ink and vinegar, then strain, and add the S.V.R.

TO RENDER GLUE WATERPROOF.—Soak glue in water till it is soft, then melt it in linseed oil, assisted with a gentle heat. This glue is not acted upon by water or damp.

TO CLEAN MARBLE.—

Common soda	Lbs.
Powd. pumice-stone	2
Finely powd. chalk	1

Pass through a fine sieve, and mix with water.

Rub it well all over the marble, and the stains will be removed; then wash the marble over with soap and water, and it will be as clean as it was at first.

CEMENT FOR ATTACHING METAL TO GLASS OR PORCELAIN.—

Thick solution of glue	Oz.
Linseed-oil varnish	1

M. Boil together, agitating until the mixture becomes as intimate as possible.

The pieces cemented should be fastened together for the space of 48 or 60 hours.

SYMPATHETIC INKS.—(1) A weak infusion of galls turns black when weakened with weak copperas water. (2) Sulphate of copper and sal ammoniac equal parts, dissolved in water, writes colourless, but turns yellow when heated.

CURE FOR WARTS.—Dry pipe-clay powdered; rub well four or six times a day.

ELIXIR OF HANOI.—A CHOLERA PREVENTIVE.—A Marseilles paper publishes the following formula for a mixture to serve as a preventive medicine in case of preliminary symptoms of cholera. It is given by Dr. Rey, chief physician of the marine, who, at the time of publication, was making daily use of it in the city hospital:—

Ess. menth. pip.	10 grammes (3iij.)
Acid carbolic	1 " (℥xv.)
Chloroform	2 " (3ss.)
Extr. catechu	5 " (3iss.)
Extr. opium	25 centigrammes (gr. iv.)
Hoffmann's liquor (sp. eth. co.)	10 grammes (3iij.)
Brandy	120 " (3iv.)
Syrup of orange flowers	60 " (3ij.)

A teaspoonful every half-hour in a cup of hot tea or coffee. In the formula, as first published, 2½ grammes of extract of opium was ordered. This was said afterwards to have been a misprint.

OINTMENT FOR CHAPPED HANDS.—

Oxide of bismuth	4 grammes
Oleic acid	30 "
White wax	12 "
Vaseline	36 "
Oil of roses	2 drops

M. S.

Apply three times a day.—*Van Harlingen.*

Foreign and Colonial.

THE CHEMICAL FACTORY OF JOHN DIEDRICH BIEBER, Hamburg, including stock, plant, and buildings, has been sold to two partners for the sum of 700,000 marks (35,000*l.*). The business will be continued under the same style as heretofore.

M. BONÉ, a Paris pharmacien, is the owner of a racehorse, called "Plaisanterie," which he bought as a yearling for 30*l.*, and which has since won ten races of the aggregate value of 7,000*l.* Its latest victory was the "Jubilee Prize," at Baden.

MANUFACTURE OF SULPHURIC ACID IN JAPAN.—It is stated that the extensive sulphuric acid factory of the Japanese Mint at Osaka has been leased to the Tokio Drug Company for seven years. The export of sulphuric acid from Japan to China is very considerable.

FATAL ERROR AT A HOSPITAL.—Two male patients in the St. Louis Hospital, Paris, were poisoned last month through an error in dispensing committed by a pupil in the pharmacy of the hospital. The young man, on hearing of the event, attempted to poison himself, but was prevented, and was afterwards arrested.

THE Rumford Chemical Works, Providence, R.I., U.S., manufacturers of Professor Horsford's acid phosphate, have recently purchased a commodious building and warehouse near their present location, where they propose to move their business a few months hence. This purchase has been necessitated by the demands of their large and increasing business, and it is pleasant to record such an evidence of well-deserved success and prosperity.

CREMATION and inhumation are not the only resources of civilisation in regard to corpses. M. Kergovatz, chemical engineer of Guiparas (Finisterre), has advocated in the Paris *Figaro* a galvano-plastic treatment which, he declares, he has proved to be practical, and which offers, he thinks, many advantages over our present methods of disposing of the dead. He rubs the body with plumbago and then plunges it in a bath of copper, zinc, silver, or gold, according to the funds available, and he thus obtains a statue which cannot fail to be an accurate likeness, and which, he thinks, would be in all respects superior to the ordinary representations of great men in our streets. Besides, the actual person of the dead is retained, while the objections to burial or cremation are avoided. He declares his intention of submitting his invention to the Municipal Council of Paris.

DISASTROUS ERRORS BY DRUGGISTS.—On August 30 Dr. Conrad, New York, prescribed 3 grammes of muriate of quinine, in four powders, for Miss Marguerite Holtz, of Hoboken, the daughter of a wealthy wine merchant of New York. The prescription was dispensed by Charles G. Am Eude. It appears that muriate of morphia was dispensed in error. The young lady and her younger sister each took a powder. According to the report before us the elder sister was dead, and the younger one was hardly expected to recover. The druggist had taken atropine in his remorse, but had partially recovered from its effects.—On September 3 a youth named William Ogden, of Philadelphia, asked a druggist (S. E. Betts) of that city for a new patent medicine for the cure of catarrh. When he had taken it home the youth snuffed some of it into his nostrils, and brought on, first, severe bleeding of the nose, and afterwards vomiting, and, finally, convulsions, from which he did not recover for ten hours. The druggist afterwards found that he had sold in error sulphate of hyoscyamin, a most deadly poison; but how he came to do so he could not explain, as he never kept the poison in stock as it was too expensive. He believed it must have been put up by the wholesale house of French, Richards & Co., by whom the supposed patent medicine was supplied. This, however, the wholesale firm deny, and there is some amount of mystery attached to the matter.

Personalities.

MR. C. J. PARK, from Wilcox & Co., London, has succeeded to the business of the late Mr. R. A. Saunders, 1 Mutley Plain, Plymouth.

MR. G. W. SPRATT, having disposed of his business at Longlaton to Mr. E. H. Judge, has succeeded to the one for many years carried on by the late Mr. James Goodall at 26 Smeinton Road, Nottingham.

At the August meeting of the Council of the Pharmaceutical Association of the Province of Quebec, Professor Attfield, F.R.S., was unanimously elected an honorary member "in recognition of his eminent services to the pharmaceutical profession."

MR. JAMES KERR, chemist and druggist, has removed from 10 Cathcart Street, where he has been established for the last eleven years, to handsome premises at 8 Hamilton Street. His branch establishment at 1 Lauriston Street is continued as formerly.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent-Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

- Antiseptics.**—10,130.—August 26, 1885.—H. H. Lake.—A communication from C. Collin & Co., of Belgium. The manufacture of an improved antiseptic.
- Bottles.**—9,733.—August 15, 1885.—C. D. Abel.—A communication from A. A. Jannin, of France. Improvements in bottles for measuring liquids by drops.
- Bottles, &c.**—10,050.—August 25, 1885. Improvements in bottles and stoppers.—10,252.—August 29, 1885.—J. Y. Johnson.—A communication from La Société Bruand and Berthier, of France. Improvements in or additions to bottles or other receptacles for liquids to enable the contents to be readily expelled or withdrawn.
- Bottle-openers.**—9,997.—August 24, 1885.—N. S. Heeley. Improvements in aerated water-bottle openers.
- Bottle-soaking, &c., Apparatus.**—9,560.—August 11, 1885.—C. T. Gibbings. Improvements in apparatus for soaking, brushing, and draining bottles.
- Bottle-stars.**—9,685.—August 14, 1885.—H. J. Brookwell. Improvements in lock-up bottle stands.
- Bottle-stopping.**—9,378.—August 6, 1885.—F. J. Beaumont.—9,391.—August 6, 1885.—G. Skudder and G. King.—9,784.—August 18, 1885.—W. P. Thompson.—A communication from G. Lilienthal, of Melbourne.—9,893.—August 20, 1885.—A. Childs.—10,066.—August 25, 1885.—J. W. Hall.—10,047.—August 25.—E. L. Lloyd and C. C. Joly.—10,226.—August 28, 1885.—T. Durrans.—10,243.—August 29, 1885.—W. Milward.—10,254.—August 29, 1885.—B. Wood and D. Rylands.
- Bottle-washing Wheel.**—9,785.—August 18, 1885.—J. Murrell. An improvement in a bottle-washing wheel, termed honeycomb washing wheel.
- Bottling-machine.**—10,256.—August 29, 1885.—S. Bunting. An improved bottling-machine.
- Capsules for Bottle stoppers.**—9,825.—August 19, 1885.—H. Aylesbury.
- Colouring Matters.**—9,858.—August 19, 1885.—J. H. Johnson. A communication from the Badische and Soda Fabrik, of Germany. Improvements in the manufacture of yellow and orange colouring matters suitable for dyeing and printing from dioxytartaric (carboxytartaric) acid.
- Corking Bottles.**—9,576.—August 11, 1885.—E. Edwards. A communication from H. Soye, of Belgium. Apparatus for corking bottles.
- Delivering Measured Quantities of Powder to Bottles.**—9,902.—August 20, 1885.—W. Bartholemew and E. B. Baker. Improvements in apparatus to be used in connection with bottles and like receptacles for the delivery of measured or regulated quantities of any powder or sufficiently divided material.

Carbon Alum.—9,853.—August 19, 1885.—T. H. Copley. Improvements in the manufacture of carbon alum, and application of the same to useful purposes.

Disinfectant.—9,353.—August 5, 1885.—W. R. Lake. A communication from M. R. Garcia, of France.—9,486.—August 10, 1885.—W. D. Borland. Application of disinfectants. —10,123.—August 26, 1885.—W. J. Bishop. Mixing liquid disinfectants with water in any required proportion by means of an automatic apparatus.—10,212.—August 28, 1885.—P. Ockenden. A communication from H. Roche and H. T. Tompsitt, of Australia. A new or improved antiseptic, deodorant, and disinfectant compound.

Dyes.—9,510.—August 10, 1885.—H. J. Haddan.—A communication from the Farbenfabriken vorm Bayer & Co., of Germany. A new manufacture of violet and blue azo dyes.

Enema-ejection Apparatus.—10,178.—August 27, 1885.—J. Thompson. Improvements in enema-ejection and douche apparatus.

Examining instrument.—10,205.—August 23, 1885.—E. de Pass.—A communication from B. du Roehier of France. An instrument for examining the internal organs of the human or animal body, and for photographing the same.

Flavouring Syrup Cordials, &c.—9,531.—August 11, 1885.—W. Duckworth. An improved compound to be employed for flavouring and preserving syrup cordials and aerated beverages.

Galvanic Bands, &c.—9,583.—August 11, 1885.—D. B. Macqueen and H. Wilkie. Improvements in galvanic bands and plates for curative purposes.

Lactaurine.—9,406.—August 7, 1885.—T. D. Harries. A beverage called "lactaurine" or "aerated whey."

Medical Belt.—9,833.—August 19, 1885.—A. Chadwick. An improved galvano-electric medical belt or band.

Obtaining Sulphur.—10,080.—August 23, 1885.—E. W. Paruell and J. Simpson. Improvements in obtaining sulphur from sulphuretted hydrogen.

Preparation of Hygienic Substances.—9,341.—August 5, 1885.—E. B. Watson and H. B. Fulton. Improved hygienic and disinfecting substances, for use as candles, night-lights, tapers, and such like, or as external remedies.

Preparing Medicines.—9,331.—August 5, 1885.—W. Watson. Improvements in preparing or dispensing medicines.

Preserving Crude Fats.—9,380.—August 6, 1885.—P. A. Newton.—A communication from S. Hornemann, of Germany. An improved process for preserving crude animal fats.

Purifying Liquids.—9,758.—August 17, 1885.—H. J. Haddan.—A communication from A. Z. Champy, N. G. A. Champy, and L. P. G. Champy, of Belgium. Method and apparatus for purifying, separating, or decomposing liquids by means of electrolysis.

Purifying Sewage.—9,992.—August 24, 1885.—J. C. Thresh and M. Hilton. The purification of sewage, sewage water, bleachers', dyers', and printers' effluent water, impure sewer and well water, and for the removal of organic matter from potable water, and for the application, utilisation, and recovery of all matter relating thereto.

Recovering the Excess of Sulphuric Anhydride.—9,694.—August 14, 1885.—G. M. S. Horton.—A communication from Root & Tinker, of United States. Recovering the excess of sulphuric anhydride used in the manufacture of certain dyes, &c.

Sifting Drugs.—10,240.—August 29, 1885.—S. M. Pelly. Facilitating the process of sifting drugs and other materials.

Soap-making.—9,673.—August 13, 1885.—C. Rumble and F. Sear. Improvements in soap-making.

Soda Crystals.—9,425.—August 7, 1885.—F. J. P. Cheesbrough.—A communication from J. Hawliczek, of Austria. An improved method of manufacturing soda crystals and caustic soda direct from the bicarbonate resulting from the ammonia soda process, and recovery of ammonia and carbonic acid, and apparatus employed therefor.

Softening Water, &c.—9,339.—August 5, 1885.—J. Cowan. Softening and purifying water.

Syphon Bottle-taps.—9,440.—August 8, 1885.—T. H. Williams and C. Lauterbach. An improvement in the taps of syphon bottles.

Treating Hydrocarbon Bodies.—10,139.—August 27, 1885.—J. K. Field. Improvements in treating hydrocarbon bodies or substances.

Treating Minerals.—9,887.—August 20, 1885.—S. H. Emmens. Improvements in the chemical treatment of certain aluminous minerals, and in the utilisation of the industrial products thereby obtained.

Treating Waste Acids.—9,614.—August 12, 1885.—A. A. Vale.—A communication from the Chemische Fabriks Actien Gesellschaft of Germany.—Treatment of the waste acids resulting from the purification of the light oils of coal tar, for the utilisation of the said waste acids and of the by-products resulting therefrom.

Vaccine Virus, &c.—9,459.—August 8, 1885.—G. Brownen. An improved process for the distribution of vaccine virus or other substances for medical and surgical uses.

Specifications published during the month:—

Postage 1*d.* each extra.

1881.

Amended Specification.

5,154.* H. Barrett. Stoppers for bottles, &c. 6*d.*

1884.

10,948. R. Barlow. Cork fastener. 6*d.*

10,968. J. Jackson and E. Sunderland. Unstopping internally-stoppered mineral-water bottles. 6*d.*

11,170 A. E. Scott. Extraction of oxides of metals from soot, &c. 4*d.*

11,449. W. R. Lake. Distillation of substances containing nitrogen, &c. 6*d.*

12,287. E. M. Knight. Filters. 6*d.*

12,718. H. Brunner. Treatment of phosphatic materials. 4*d.*

12,789. T. Cockcroft. Bottling aerated and gaseous liquids. 6*d.*

12,841. C. Harrison. Soap. 2*d.*

13,080. W. H. Samson. Deodorising refuse substances for manures. 2*d.*

13,142. J. C. S. Harper. Tooth-brush. 6*d.*

13,211. D. Dawson and G. W. Oldham. Dyeing silk and woollen fibres with insoluble azo-colouring matters. 4*d.*

13,246. T. Sutcliffe. Bottles and stoppers for aerated waters, &c. 6*d.*

13,485. W. Shepherd. Stoppers for bottles, jars, &c. 6*d.*

13,667. A. J. Bickmore. Manufacturing an extract from cereals and pulse. 4*d.*

13,820. H. J. Melsom and H. W. Dowell. Holding syphons for aerated water while cleaning the syphon head. 6*d.*

15,406. A. K. Levi. Emptying or filling bottles, &c., without uncorking or unstopping. 6*d.*

15,719. H. Knight. Precipitated sulphide of zinc for use as a pigment. 4*d.*

16,220. H. Knight. Sulphide of zinc, &c. 4*d.*

1885.

1,084. J. Reid. Revivification of hydrate of lime after it has been used for the purification of gas. 4*d.*

1,937. E. W. Parnell and J. Simpson. Recovery of ammonia in the manufacture of carbonate of soda by the ammonia process, &c. 4*d.*

4,833. J. S. Davidson and T. Scott. Closing bottles. 6*d.*

5,706. A. Collingridge. Treating salt. 4*d.*

6,134. J. H. Johnson, manufacture of naphthol-carbonic alkaline salts, &c. 2*d.*

7,004. J. Hanford. Compound for cleansing wool, &c. 2*d.*

7,135. P. Römer. Manufacture of bichromate of potash. 2*d.*

7,343. H. J. Haddan. Anesthetics. 2*d.*

7,355. H. H. Lake. Manufacture of carbonate of soda. 2*d.*

7,630. C. E. Avery. Extracts and liquors of logwood. 4*d.*

Trade Report.

MINCING LANE, September 12.

JUST at present we are feeling the full force of the holiday season, and Mincing Lane bears a very deserted appearance, while little business and plenty of talk is the order of the day with those remaining on the spot. We do not expect to see real hard work resumed much before the general election has taken place, as until then political matters will absorb increasing attention.

The Board of Trade returns for last month show again a marked decrease in the exports, and upon the first eight months of the year there is a deficit, as compared with same period of last year, of no less than 14,396,585*l.* value.

Bank rate still remains at 2 per cent.

The great majority of articles remain as quoted by us last month, and where changes have taken place they have nearly all been in favour of buyers.

The public drug sales held the 3rd inst. were tame to a degree. There were in all ninety-one various articles offered, some in very large quantities, and out of this number no less than fifty-three failed to find buyers even for a single package. In the other thirty-eight articles sales were made to a greater or less extent. Under such circumstances, which are no exception, the sales are becoming very monotonous for those who are obliged to sit them through, and it is not surprising if others not so obliged are now often making themselves conspicuous by their absence.

It must be known beforehand that many of the articles cannot make the limits placed upon them, and they would be

much better left out altogether rather than that so much time should be wasted in consequence.

ACIDS have had a remarkably quiet time of it; citric, from simple absence of trade, giving way to 1s. 7d. per lb. for spot, and no forward business doing. Tartaric has also declined in value, and foreign make is difficult of sale at 1s. 6½d. per lb., English 1s. 7¼d. per lb. Oxalic is now quoted at 4d. per lb.

ALOES are generally lower. East India socotrine fail to find buyers at 8l. per cwt. In last drug sales, out of 137 cases Cape offered, 62 cases sold at easier rates, ranging from 10s. for very inferior to 35s. 6d. per cwt. for fine hard bright quality.

ANTIMONY.—Crude meets with steady business at 21l. to 22l. per ton, regulus in slow demand at 39l. per ton.

ARSENIC is now offered at 11s. per cwt. for powder.

BALSAMS continue in very poor demand; Peru at 6s. 6d. to 7s. per lb., Capivi 1s. 6½d. to 1s. 7d. per lb.

BARK.—The large sales reported in our last have been followed by two small ones, at both of which prices were barely maintained. Those held last Tuesday showed signs of weakness, but since then some fairly considerable private sales have taken place. Shipments of Ceylon bark at present indicate a falling-off, while those from Java (though small in comparison) are increasing, and some of the barks from the latter place are of remarkably fine quality. There is to be a sale of Java bark in Holland this month, at which about 1,600 packages will be offered.

BLEACHING POWDER is fairly steady at 7l. 10s. to 7l. 15s. per ton ex warehouse here.

BORAX continues in good demand at 35s. and 37s. per cwt.

CALUMBA ROOT.—157 packages were offered in last drug sales, of which 64 bags sold at prices ranging from 20s. to 38s. per cwt.

CAMPHOR continues firm, and, as far as concerns the raw material, it is stated that all afloat belongs to European refiners, and that the American makers are endeavouring (so far ineffectually) to cover their own requirements in the Japanese market. The refined article is somewhat quieter, because the recent considerable business has for the most part satisfied wants for the time being. Stocks of raw camphor are now 6,208 packages, against 9,380 packages this time last year, and none whatever arrived during the past month.

CAMOMILES.—At the end of last month an attempt at a run in this article was made, but it proved of very short duration, and, after a little excitement, price is back again at what it was at date of our last report, namely, 70s. to 71s. per cwt. for good new flowers.

CANTHARIDES.—New flies are now appearing on the Russian markets, and prices for new to arrive are less than those asked on the London market for old ones, notwithstanding which, in the expectation of still lower rates, there is no inclination to order for arrival.

CARDAMOMS.—Of 100 packages offered in last public sales 37 packages sold, Malabar sorts at 2s. 2d. to 3s. 9d. per lb., according to quality.

CASSIA LIGNEA is very quiet at 28s. per cwt. Stocks, although still large, are decreasing, and it is worthy of note that during the first eight months of this year only 4,398 packages were imported, against 20,195 during the corresponding period of last year.

CLOVES, with increased stocks and large arrivals, are lower in value, Zanzibars at 4¼d. to 5d. per lb.

COCA LEAVES.—Of 31 cases offered in last drug sales 1 case found buyers at prices ranging from 1s. to 2s. 3d. per lb., according to quality.

COCHINEAL continues steady, at prices of 1s. to 1s. 6d. per lb., according to the various sorts, and with reducing stocks and smaller arrivals lower figures are not to be anticipated.

CREAM OF TARTAR is very quiet and difficult of sale at 26s. 6d. per cwt. "firsts."

CUBEBS are firmly held for 12l. per cwt., and stocks are low, being on August 31 only 56 bags. Deliveries are, however, small also, only fifteen bags having left the warehouses during the month.

ESSENCE OF LEMON.—Quiet, at late rates, with very little demand. Advices from Messina still assert that new crop prices must be dearer, although they meet with very little credence here, where, in fact, of late nothing but cheaper prices for everything appear to be believed in.

GALLS.—Private sales of China have been made at 48s. per cwt.

GINGER meets with steady business in all qualities at unchanged prices.

GUM ARABIC continues firm at former rates, notwithstanding that most qualities are coming in more freely.

GLYCERINE continues very firm, and higher rates are to be expected as the season now commencing advances.

HONEY.—No less than 400 packages were advertised for sale last Thursday, of which about 100 were, however, withdrawn before the sale. Out of 200 cases Californian offered 10 cases sold at 30s. per cwt. Of 44 packages New Zealand five sold at 37s. per cwt.; and of 47 barrels Jamaica four sold at 28s. to 32s. per cwt.

IPECACUANHA, although still firmly held, meets with less business of late.

ISINGLASS.—At the periodical sales held August 25 the total quantity East India offered was only 335 packages (being much below the average), of which 204 found buyers. Purse is still in good request for the better qualities, fair to superior sorts being fully 1d. to 3d. per lb. higher. Inferior grades slow, at late prices. Fine Saigon leaf is 2d. per lb. dearer. Good pale Penang and Bombay fins very steady, but other descriptions dull, and generally cheaper all round. Next sales, September 29.

LEMON-JUICE is again lower, at 22l. per pipe f.o.b. Messina, and for January shipment at 21l. per pipe. Notwithstanding the easier quotations there is very little actual business doing.

LIME-JUICE is now being more freely offered at 2s. 8d. to 2s. 10d. per gallon.

MENTHOL.—Two cases crystals were offered in last drug sales, and bought in at 28s. per lb.

MORPHIA SALTS are steady at late rates, and higher prices would not surprise us.

OPIUM remains unchanged in prices, notwithstanding that the new crop has turned out decidedly less than was anticipated, and is, moreover, to a great extent, rain damaged. But for the generally quiet tone of trade such a state of affairs must have led to higher prices for all qualities.

OILS.—Aniseed has been sold as low as 6s. 7d. per lb., but, in consequence of higher rates in America, is now more firmly held. H. G. Hotchkiss' peppermint oil with public sale offers, and a flat market, receded in value to 15s. 9d., and it is also reported that a large line was done as low as 15s. 6d. per lb., since when more firmness has been shown, and now 16s. to 16s. 6d. per lb. is asked. Of late this article appears to be entirely artificially controlled, i.e., by speculative influences brought to bear upon it, and with which the ordinary rules of supply and demand have nothing to do.

OTTO OF ROSES.—The new crop arrivals are just beginning to reach the London market, and business, in face of the double advantage of new oil with reduced rates, is brisk in all qualities.

PETROLEUM OIL is again dearer, at the following rates:—Spot 7½d. to 7¼d., September 7d., and October-December 6 15-16d. per gallon.

PETROLEUM SPIRIT.—Common steady, at 6¼d., and refined 7d. to 7¼d. per gallon.

PIMENTO.—No change from last rates; stocks here continue considerable.

POTASH CHLORATE is again advanced in price to 7¼d. per lb., and still enjoys a very firm position.

POTASSIUM IODIDE.—English make remains firm at 12s. per lb. Bromide of American manufacture is in increasing demand.

QUASSIA.—In last public sales 22 tons offered were all bought in at 5l. 5s. to 6l. per ton.

QUICKSILVER is very quiet at 5*l.* 17*s.* 6*d.* per bottle importers' price, and a little less in second hands.

QUININE at unchanged rates has met with fair business, which would have been larger, however, were manufacturers willing to make concessions, as some fairly considerable orders are in the market at limits somewhat under current prices. The slight falling-off in shipments of bark from Ceylon just now at the end of the season is made an excuse for firmness by some second-hand holders, although with the cutting season just coming on we believe quinine manufacturers see no cause for alarm.

SAFFRON, at unchanged rates, meets with less demand, and direct shipments from Spain are being resumed.

SALTPETRE.—English refined at lower rate of 21*s.* 6*d.* per cwt. for barrels attracts but little attention.

SODA CRYSTALS, although lower again at 2*l.* 16*s.* per ton ex ship here, find but very limited business.

SOY.—China of good quality is steady at 1*s.* 7½*d.* per gallon.

SULPHATE OF COPPER.—Very small trade at 16*l.* 10*s.* per ton.

TAMARINDS, in consequence of good supplies, are being offered at very low prices. Fine West India quoted 12*s.* 6*d.* per cwt.

TURPENTINE is again lower. American spirit, spot, 26*s.* 6*d.*; September-December, 26*s.* 6*d.*; and January-April, 27*s.* 3*d.* per cwt.

VANILLOES met with good business in last drug sales, and of 159 tins offered no less than 150 found buyers. Sound beans at from 10*s.* 6*d.* to 20*s.* per lb., according to length and quality, mouldy at less.

P.S.—September 16.—QUICKSILVER.—The importers have to-day raised their price to 6*l.* per bottle, at which a fairly considerable business is being done.

(FROM OUR AMERICAN CORRESPONDENT.)

NEW YORK, September 1.

The home demand has improved, and it is now believed that the season's trade will prove fairly prosperous. Recent changes have been chiefly of an upward character, there is no speculative interest at work, the purchases made are wholly of a legitimate character, and pass into consumption. The export drug trade has not improved in proportion, but still a steady demand exists for most of the staple articles.

The prices in parentheses in sterling are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers can, therefore, see at a glance the course of this market compared with their own.

ALOES.—Three tons came to hand from Curacao, meeting with no demand they were sold at 6*c.* per lb. (29*s.*).

BALSAMS.—During August only 2 tons of *Copaiba* arrived on the market; the export inquiry at the same time being good, stocks are somewhat reduced, and the price is improving. Angostura is quoted 32½*c.* (1*s.* 6*d.*); Para, 34*c.* (1*s.* 6½*d.*); Maracaibo, 30*c.* (1*s.* 4½*d.*); Carthagena, 31*c.* (1*s.* 5*d.*); Maranhon, 32*c.* (1*s.* 5½*d.*). *Tolu*.—After great depression, attention has been drawn to this article by the almost total cessation of arrivals, and the price has already risen 10 per cent., to 34*c.* (1*s.* 6½*d.*). Stocks must, however, be large. *Canada* meets with no demand at the reduced price of 32*c.* (1*s.* 5½*d.*).

TONCA BEANS.—A large shipment of about 5 tons very fine Angostura beans have arrived from El Callao, but are held for \$1.60 (7*s.* 2*d.*); besides this, fully 2½ tons came to hand from Europe during the past month.

GUM CHIELE still keeps in good demand, 500*l.* worth being entered for shipment to Liverpool.

ANGOSTURA BARK.—A shipment of about 5,000 lbs. arrived out was reshipped to Hamburg; price about 12*c.* per lb. (60*s.* cwt.).

SPERMACE.—The market is bare of supplies, and as the manufacturers are unable to deliver, even on their contracts,

there appears to be little hope of their meeting the demand for some months. The price is nominally 31*c.* (1*s.* 4½*d.*), but there is none to be had. During August the shipments fell to 3 tons.

COD-LIVER OIL meets with little or no attention.

ESSENTIAL OILS.—The price for strictly pure *Oil Sassafras* continues to rule about 40*c.* in large lots (1*s.* 9*d.*). This is lower than it has been for a number of years. *Wintergreen* is advancing, and is now quoted \$1.90 in export packages (8*s.* 3*d.* lb.). *Pennyroyal* has declined to 90*c.* (4*s.*), and *Spearmint* to \$4.50 (19*s.*).

JAPAN WAX.—Some arrivals have taken place, and probably 15½*c.* (7½*d.*) would be accepted. The quality is white squares.

COCA LEAVES.—The arrivals are falling off, 5,000 lbs. having only reached the market from Aspinwall during the month. The quality is good dark green, and price about 40*c.* lb. (1*s.* 9½*d.*). *Cocaine* is again in very large demand all over the States; makers' price, say \$30 (124*s.*) net per oz. In gramme-vials it is selling for 5*s.* each.

ROOTS.—The demand for the new Western *Senega* has set in briskly and prices are much firmer; prime are now quoted 45*c.* (2*s.* 1*d.*), while chumpy and dark roots can be had for 42*c.* (1*s.* 11½*d.*). *Serpentaria* is getting cheaper; the market price is 30*c.* (1*s.* 4*d.*), but no quantity can as yet be met with at that figure. *Jalap* has ceased to come forward, and stocks are reduced to 105 bales. Six tons were taken for export during the month at prices averaging 10*c.* (5½*d.*), but there is no more offering at anything like that price. The stocks left are prime heavy roots, and are held for 13*c.* (7½*d.*). *Sarsaparilla*.—The supplies of Mexican being nearly exhausted, a shipment of 100 bales on the way by sailer was eagerly looked for. The vessel arrived to-day, and it now appears the whole consignment has been disposed of to a large consumer here. The market at once advanced to 13*c.* for second-hand parcels (7½*d.*). Honduras meets with good inquiry for the lower qualities, and these have become scarce. Holders of the prime brands have greatly come down in their pretensions. Crown M.C. can be had at 45*c.* (2*s.*), and J.C. with T. under 47*c.* (2*s.* 2*d.*).

BROMIDE POTASSIUM is unchanged at 34*c.* (1*s.* 5½*d.*, 5 per cent.).

QUININE.—The price of American still remains at 68*c.* (3*s.*, 5 per cent.), while the German houses only quote 1*c.* per oz. lower. It will, therefore, be seen that the price all over the world is being kept down by this action of the American manufacturers. From recent experience European makers know they cannot in the future get a better price for this product at home than they do here. The outlook would certainly indicate higher rates in a few months, except the bark market comes down, but, in any case, it is not expected that 2*s.* 6*d.* per oz. will be again seen this year.

BEESEWAX.—The price of American having greatly declined, the market now admits of it being exported, and already heavy shipments have taken place at 25*c.* to 26*c.* per lb. (6*l.* 4*s.* to 6*l.* 8*s.* per cwt.).

OIL PEPPERMINT.—The export demand during August was much smaller than was expected; this caused the holders of the limited stocks to push sales, and consequently the market began to decline. This has been helped along by conflicting reports arriving from the different districts devoted to peppermint cultivation; distillation is now going on in Wayne and Michigan; and although no new oil has as yet appeared on the market, there are not wanting all sorts of rumours that supplies will be very large, that the crop will yield only an average, and that it will not be much more than last year (which was a short one). Parties who hold no stock, and want to get the price down, of course are active in circulating the first of these, but when they have secured their supply will add their voice to those who cry "short crop." The truth lies between these extremes; there will be an average crop and no more; as prices decline, it will be well for buyers to secure what will carry them on till next year at a fair price, and not wait too long, or they may have again to pay high prices. The market for H. G. Hotchkiss is \$3.50 (16*s.*); bulk Wayne County oil, \$3.25 (13*s.* 8*d.* net), with a downward tendency.

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.

		Last Month		This Month	
ACIDS—		s. d.	s. d.	s. d.	s. d.
Acetic	per lb.	0 2½ to 0 0	0 2½ to 0 0	0 2½ to 0 0	0 2½ to 0 0
pure	"	0 5 .. 0 9	0 5 .. 0 9	0 5 .. 0 9	0 5 .. 0 9
glacial	"	0 6 .. 1 0	0 6 .. 1 0	0 6 .. 1 0	0 6 .. 1 0
Benzoic Sublimate	per oz.	0 0 .. 3 6	0 0 .. 3 6	0 0 .. 3 6	0 0 .. 3 6
Ex Gum.	"	0 6½ .. 0 0	0 6½ .. 0 0	0 6½ .. 0 0	0 6½ .. 0 0
Citric	per cwt.	1 7½ .. 0 0	1 7 .. 0 0	1 7 .. 0 0	1 7 .. 0 0
Gallic	"	3 2 .. 3 6	3 2 .. 3 6	3 2 .. 3 6	3 2 .. 3 6
Hydrochloric	per cwt.	4 6 .. 7 6	4 6 .. 7 6	4 6 .. 7 6	4 6 .. 7 6
Nitric	per lb.	0 3 .. 0 3½	0 3 .. 0 3½	0 3 .. 0 3½	0 3 .. 0 3½
Oxalic	"	0 5 .. 0 0	0 4 .. 0 0	0 4 .. 0 0	0 4 .. 0 0
Sulphuric	"	0 0½ .. 0 1	0 0½ .. 0 1	0 0½ .. 0 1	0 0½ .. 0 1
Salicylic	"	6 9 .. 9 6	6 9 .. 9 6	6 9 .. 9 6	6 9 .. 9 6
Tannic	"	1 4 .. 2 9	1 4 .. 2 9	1 4 .. 2 9	1 4 .. 2 9
Tartaric, English	"	1 7½ .. 0 0	1 7½ .. 0 0	1 7½ .. 0 0	1 7½ .. 0 0
foreign	"	1 6½ .. 0 0	1 6½ .. 0 0	1 6½ .. 0 0	1 6½ .. 0 0
ANTIMONY, crude	per cwt.	21 0 .. 0 0	21 0 .. 0 0	21 0 .. 0 0	21 0 .. 0 0
star	"	39 0 .. 40 0	39 0 .. 40 0	39 0 .. 40 0	39 0 .. 40 0
ARSENIC, lump	"	21 0 .. 22 0	21 0 .. 22 0	21 0 .. 22 0	21 0 .. 22 0
powder	"	12 0 .. 0 0	11 0 .. 0 0	11 0 .. 0 0	11 0 .. 0 0
BRIMSTONE, rough	"	8 0 .. 8 6	8 0 .. 8 6	8 0 .. 8 6	8 0 .. 8 6
roll	"	8 9 .. 9 9	8 9 .. 9 9	8 9 .. 9 9	8 9 .. 9 9
flour	"	10 0 .. 12 6	10 0 .. 12 6	10 0 .. 12 6	10 0 .. 12 6
GLYCERINE, German	"	50 0 .. 0 0	50 0 .. 0 0	50 0 .. 0 0	50 0 .. 0 0
refined	"	37 6 .. 42 6	37 6 .. 42 6	37 6 .. 42 6	37 6 .. 42 6
corum brown	per lb.	17 0 .. 0 0	17 0 .. 0 0	17 0 .. 0 0	17 0 .. 0 0
IODOPERM	per lb.	0 8½ .. 0 0	0 8½ .. 0 0	0 8½ .. 0 0	0 8½ .. 0 0
IODINE, dry	per oz.	1 0 .. 0 0	1 0 .. 0 0	1 0 .. 0 0	1 0 .. 0 0
resublimed	"	0 10 .. 1 4	0 10 .. 1 4	0 10 .. 1 4	0 10 .. 1 4
MAGNESIA, calcined	per lb.	5 0 .. 0 0	5 0 .. 0 0	5 0 .. 0 0	5 0 .. 0 0
Hwds.	"	117 3 .. 120 0	116 0 .. 117 6	116 0 .. 117 6	116 0 .. 117 6
MERCURY	per bot.	2 11 .. 0 0	2 11 .. 0 0	2 11 .. 0 0	2 11 .. 0 0
PRECIPITATE, red	per lb.	2 9 .. 0 0	2 9 .. 0 0	2 9 .. 0 0	2 9 .. 0 0
white	"	1 8 .. 2 0	1 8 .. 2 0	1 8 .. 2 0	1 8 .. 2 0
PRUSSIAN BLUE	"	11 6 .. 0 0	11 6 .. 0 0	11 6 .. 0 0	11 6 .. 0 0
SANTONINE	"	10 0 .. 0 0	10 0 .. 0 0	10 0 .. 0 0	10 0 .. 0 0
SALICINE	"	35 0 .. 0 0	35 0 .. 0 0	35 0 .. 0 0	35 0 .. 0 0
THYMOL	"	115 0 .. 0 0	115 0 .. 0 0	115 0 .. 0 0	115 0 .. 0 0
SALTS—		125 0 .. 0 0	125 0 .. 0 0	125 0 .. 0 0	125 0 .. 0 0
Alum	per ton	0 5 .. 0 0	0 5 .. 0 0	0 5 .. 0 0	0 5 .. 0 0
powder	"	560 0 .. 640 0	560 0 .. 640 0	560 0 .. 640 0	560 0 .. 640 0
Ammonia:		230 0 .. 240 0	230 0 .. 240 0	230 0 .. 240 0	230 0 .. 240 0
Carbonate	per lb.	83 0 .. 96 0	83 0 .. 96 0	83 0 .. 96 0	83 0 .. 96 0
Hydrochlorate,	per cwt.	70 0 .. 90 0	70 0 .. 90 0	70 0 .. 90 0	70 0 .. 90 0
crude, white	"	38 0 .. 42 0	38 0 .. 42 0	38 0 .. 42 0	38 0 .. 42 0
Sulphate	"	7 6 .. 0 0	7 6 .. 0 0	7 6 .. 0 0	7 6 .. 0 0
Argol, Cape	"	35 0 .. 37 0	35 0 .. 37 0	35 0 .. 37 0	35 0 .. 37 0
Red	per lb.	2 6 .. 0 0	2 6 .. 0 0	2 6 .. 0 0	2 6 .. 0 0
Oporto, red	"	4 5 .. 4 7	4 5 .. 4 7	4 5 .. 4 7	4 5 .. 4 7
Bleaching powder	"	5 6 .. 6 0	5 6 .. 6 0	5 6 .. 6 0	5 6 .. 6 0
Borax, British refined	"	16 3 .. 16 9	16 6 .. 0 0	16 6 .. 0 0	16 6 .. 0 0
Calomel	per lb.	46 0 .. 55 0	46 0 .. 55 0	46 0 .. 55 0	46 0 .. 55 0
Chloral hydrate	"	2 0 .. 0 0	2 0 .. 0 0	2 0 .. 0 0	2 0 .. 0 0
Liebreich's	"	127 0 .. 0 0	127 0 .. 0 0	127 0 .. 0 0	127 0 .. 0 0
Copper:		109 0 .. 0 0	109 0 .. 0 0	109 0 .. 0 0	109 0 .. 0 0
Sulphate	per cwt.	3 6 .. 4 0	3 6 .. 4 0	3 6 .. 4 0	3 6 .. 4 0
Copperas, green	per ton	3 6 .. 5 0	3 6 .. 5 0	3 6 .. 5 0	3 6 .. 5 0
Corrosive Sublimate	per lb.	40 0 .. 0 0	40 0 .. 0 0	40 0 .. 0 0	40 0 .. 0 0
Cream Tartar, French	per cwt.	72 0 .. 0 0	72 0 .. 0 0	72 0 .. 0 0	72 0 .. 0 0
brown	"	4 6 .. 5 0	4 6 .. 5 0	4 6 .. 5 0	4 6 .. 5 0
Epsom Salts	"	2 3 .. 2 4	2 3 .. 2 4	2 3 .. 2 4	2 3 .. 2 4
Glauber Salts	"	0 3½ .. 0 0	0 3½ .. 0 0	0 3½ .. 0 0	0 3½ .. 0 0
Magnesia: Carbonate	per lb.	29 0 .. 0 0	29 0 .. 0 0	29 0 .. 0 0	29 0 .. 0 0
Pond, Hwds.	"	46 0 .. 46 6	46 0 .. 46 6	46 0 .. 46 6	46 0 .. 46 6
Morphine Murias	"	0 6½ .. 0 7½	0 7½ .. 0 0	0 7½ .. 0 0	0 7½ .. 0 0
Phosphorus	per lb.	0 9 .. 0 10	0 9 .. 0 10	0 9 .. 0 10	0 9 .. 0 10
Potash:		1 11 .. 2 0	1 11 .. 2 0	1 11 .. 2 0	1 11 .. 2 0
Bichromate	"	10 6 .. 11 6	10 6 .. 11 6	10 6 .. 11 6	10 6 .. 11 6
Carbonate:		1 8 .. 0 0	1 8 .. 0 0	1 8 .. 0 0	1 8 .. 0 0
Potashes, Canada,	per cwt.	9 0 .. 0 0	9 0 .. 0 0	9 0 .. 0 0	9 0 .. 0 0
1st sort	"	11 6 .. 12 0	11 6 .. 12 0	11 6 .. 12 0	11 6 .. 12 0
Pearlshes, Canada,	"	3 6 .. 0 0	3 6 .. 0 0	3 6 .. 0 0	3 6 .. 0 0
1st sort	per lb.	0 6 .. 0 7	0 7½ .. 0 0	0 7½ .. 0 0	0 7½ .. 0 0
Chlorate	"	0 9 .. 0 10	0 9 .. 0 10	0 9 .. 0 10	0 9 .. 0 10
Prussiate	"	1 11 .. 2 0	1 11 .. 2 0	1 11 .. 2 0	1 11 .. 2 0
red	per cwt.	10 6 .. 11 6	10 6 .. 11 6	10 6 .. 11 6	10 6 .. 11 6
Sulphate	"	1 8 .. 0 0	1 8 .. 0 0	1 8 .. 0 0	1 8 .. 0 0
Potassium:		9 0 .. 0 0	9 0 .. 0 0	9 0 .. 0 0	9 0 .. 0 0
Bromide	per cwt.	11 6 .. 12 0	11 6 .. 12 0	11 6 .. 12 0	11 6 .. 12 0
Chloride	per lb.	3 6 .. 0 0	3 6 .. 0 0	3 6 .. 0 0	3 6 .. 0 0
Iodide	"	3 0 .. 0 0	3 0 .. 0 0	3 0 .. 0 0	3 0 .. 0 0
Quinine:		0 8 .. 0 8½	0 8 .. 0 8½	0 8 .. 0 8½	0 8 .. 0 8½
Sulphate, British, in	per oz.	38 0 .. 40 0	38 0 .. 40 0	38 0 .. 40 0	38 0 .. 40 0
bottles	"	3 6 .. 0 0	3 6 .. 0 0	3 6 .. 0 0	3 6 .. 0 0
Sulphate, French	"	3 0 .. 0 0	3 0 .. 0 0	3 0 .. 0 0	3 0 .. 0 0
Sulphate, German	"	3 0 .. 0 0	3 0 .. 0 0	3 0 .. 0 0	3 0 .. 0 0
Sal Acetos	per lb.	16 3 .. 16 4½	16 3 .. 16 4½	16 3 .. 16 4½	16 3 .. 16 4½
Sal Ammoniac, British	per cwt.	0 3 .. 0 0	0 3 .. 0 0	0 3 .. 0 0	0 3 .. 0 0
Saltpetre:		0 3 .. 0 0	0 3 .. 0 0	0 3 .. 0 0	0 3 .. 0 0
Bengal, 6 per cent. or	"	0 3 .. 0 0	0 3 .. 0 0	0 3 .. 0 0	0 3 .. 0 0
under	"	0 3 .. 0 0	0 3 .. 0 0	0 3 .. 0 0	0 3 .. 0 0

Saltpetre:—(cont.)

Bengal, over 6 per cent.	per cwt.	s. d. 0 0 to 0 0	s. d. 0 0 to 0 0	s. d. 0 0 to 0 0	s. d. 0 0 to 0 0
British, refined	"	22 6 .. 23 6	21 6 .. 22 6	21 6 .. 22 6	21 6 .. 22 6
Soda: Bicarbonate	"	7 6 .. 7 9	7 6 .. 7 9	7 6 .. 7 9	7 6 .. 7 9
Hwds.	"	45 0 .. 0 0	45 0 .. 0 0	45 0 .. 0 0	45 0 .. 0 0
Carbonate:					
Soda Ash	per deg.	0 1½ .. 0 0	0 1½ .. 0 0	0 1½ .. 0 0	0 1½ .. 0 0
Soda Crystals	per cwt.	2 10½ .. 0 0	2 10 .. 0 0	2 10 .. 0 0	2 10 .. 0 0
Caustic	"	8 3 .. 8 9	8 9 .. 9 0	8 9 .. 9 0	8 9 .. 9 0
Hyposulphite	"	8 0 .. 8 6	8 0 .. 8 6	8 0 .. 8 6	8 0 .. 8 6
Nitrate	"	10 3 .. 10 9	10 3 .. 10 9	10 3 .. 10 9	10 3 .. 10 9
Zinc Sulphate	"	12 0 .. 14 0	12 0 .. 14 0	12 0 .. 14 0	12 0 .. 14 0
SUGAR OF LEAD, White	"	30 0 .. 34 0	30 0 .. 34 0	30 0 .. 34 0	30 0 .. 34 0
Brown	"	26 6 .. 0 0	26 6 .. 0 0	26 6 .. 0 0	26 6 .. 0 0
VERDIGRIS	per lb.	0 9 .. 0 10½	0 9 .. 0 10½	0 9 .. 0 10½	0 9 .. 0 10½
VERMILION, English	"	2 0 .. 0 0	2 0 .. 0 0	2 0 .. 0 0	2 0 .. 0 0
China	"	2 2 .. 0 0	2 2 .. 0 0	2 2 .. 0 0	2 2 .. 0 0
DRUGS.					
ALOES, Hepatic	per cwt.	60 0 .. 140 0	60 0 .. 140 0	60 0 .. 140 0	60 0 .. 140 0
Socotrine	"	90 0 .. 170 0	80 0 .. 160 0	80 0 .. 160 0	80 0 .. 160 0
Cape, good	"	32 0 .. 40 0	27 6 .. 35 6	27 6 .. 35 6	27 6 .. 35 6
Inferior	"	27 0 .. 31 0	25 0 .. 30 0	25 0 .. 30 0	25 0 .. 30 0
Barbados	"	40 0 .. 120 0	40 0 .. 120 0	40 0 .. 120 0	40 0 .. 120 0
Curacao	"	30 0 .. 80 0	30 0 .. 80 0	30 0 .. 80 0	30 0 .. 80 0
AMBERGRIS, grey	per oz.	75 0 .. 90 0	75 0 .. 90 0	75 0 .. 90 0	75 0 .. 90 0
BALSAM—					
Canada	per lb.	1 6 .. 1 9	1 3 .. 1 6	1 3 .. 1 6	1 6 .. 1 9
Capivi	"	1 6 .. 1 7	1 6 .. 1 7	1 6 .. 1 7	1 6 .. 1 7
Peru	"	7 3 .. 7 4	6 6 .. 7 0	6 6 .. 7 0	7 3 .. 7 4
Tolu	"	1 5 .. 1 6	1 5 .. 1 6	1 5 .. 1 6	1 5 .. 1 6
BARKS—					
Canella alba	per cwt.	27 6 .. 30 0	27 6 .. 30 0	27 6 .. 30 0	27 6 .. 30 0
Cascarilla	"	28 0 .. 35 0	28 0 .. 35 0	28 0 .. 35 0	28 0 .. 35 0
CINCHONA—					
Peru, grey	per lb.	0 6 .. 1 6	0 6 .. 1 6	0 6 .. 1 6	0 6 .. 1 6
Calisaya, flat	"	0 6 .. 1 8	0 6 .. 1 8	0 6 .. 1 8	0 6 .. 1 8
quill	"	1 0 .. 4 0	1 0 .. 4 0	1 0 .. 4 0	1 0 .. 4 0
Carthageana	"	0 3 .. 1 2	0 3 .. 1 2	0 3 .. 1 2	0 3 .. 1 2
Columbian	"	0 6 .. 1 2	0 6 .. 1 2	0 6 .. 1 2	0 6 .. 1 2
Cuprea	"	0 3 .. 0 10	0 3 .. 0 10	0 3 .. 0 10	0 3 .. 0 10
New Granada	"	0 6 .. 1 10	0 6 .. 1 10	0 6 .. 1 10	0 6 .. 1 10
Pitayo & Maracaibo	"	0 2 .. 0 10	0 2 .. 0 10	0 2 .. 0 10	0 2 .. 0 10
Red	"	1 6 .. 6 0	1 6 .. 6 0	1 6 .. 6 0	1 6 .. 6 0
East India, crown	"	0 3 .. 1 10	0 3 .. 1 10	0 3 .. 1 10	0 3 .. 1 10
red	"	0 3 .. 2 6	0 3 .. 2 6	0 3 .. 2 6	0 3 .. 2 6
BUCHU LEAVES	"	0 2 .. 1 0	0 2 .. 1 0	0 2 .. 1 0	0 2 .. 1 0
CAMPOR, China	per cwt.	85 0 .. 0 0	85 0 .. 0 0	85 0 .. 0 0	85 0 .. 0 0
Japan	"	85 0 .. 0 0	85 0 .. 0 0	85 0 .. 0 0	85 0 .. 0 0
Refin. Eng.	per lb.	1 1½ .. 0 0	1 1½ .. 0 0	1 1½ .. 0 0	1 1½ .. 0 0
Tablets	"	1 1½ .. 1 3	1 1½ .. 1 3	1 1½ .. 1 3	1 1½ .. 1 3
CANTHARIDES, China	"	4 0 .. 4 6	4 0 .. 4 6	4 0 .. 4 6	4 0 .. 4 6
Russian	"	5 6 .. 6 0	5 6 .. 6 0	5 6 .. 6 0	5 6 .. 6 0
CAMOMILE FLOWERS	per cwt.	68 0 .. 70 0	70 0 .. 71 0	70 0 .. 71 0	70 0 .. 71 0
CAROTHEUM	per lb.	24 0 .. 35 0	24 0 .. 35 0	24 0 .. 35 0	24 0 .. 35 0
CHIRETTA	"	0 3 .. 0 0	0 4 .. 0 0	0 4 .. 0 0	0 3 .. 0 0
DRAGON'S BLOOD, lp.	per cwt.	70 0 .. 240 0	70 0 .. 240 0	70 0 .. 240 0	70 0 .. 240 0
ERGOT OF RYE	per lb.	0 6½ .. 0 10	0 6½ .. 0 10	0 6½ .. 0 10	0 6½ .. 0 10
FRUITS & SEEDS (see also Seeds and Spices)					
Anise, China Star	per cwt.	92 6 .. 95 0	92 6 .. 95 0	92 6 .. 95 0	92 6 .. 95 0
Russian	"	27 6 .. 33 0	27 6 .. 33 0	27 6 .. 33 0	27 6 .. 33 0
Beans, Tonquin	per lb.	2 0 .. 4 0	2 0 .. 4 0	2 0 .. 4 0	2 0 .. 4 0
Cardamoms, Malabar,	"	3 6 .. 4 6	3 6 .. 4 6	3 6 .. 4 6	3 6 .. 4 6
good	"	1 9 .. 2 9	1 9 .. 2 9	1 9 .. 2 9	1 9 .. 2 9
inferior	"	2 0 .. 3 0	2 0 .. 3 0	2 0 .. 3 0	2 0 .. 3 0
Aleppy	"	1 6 .. 3 6	1 6 .. 3 6	1 6 .. 3 6	1 6 .. 3 6
Madras	"	2 0 .. 2 10	2 0 .. 2 10	2 0 .. 2 10	2 0 .. 2 10
Ceylon	"	1 0 .. 4 0	1 0 .. 4 0	1 0 .. 4 0	1 0 .. 4 0
Malabar sorts	"	11 0 .. 13 0	11 0 .. 13 0	11 0 .. 13 0	11 0 .. 13 0
Cocculus Indicus	per cwt.	0 10 .. 1 3	0 10 .. 1 3	0 10 .. 1 3	0 10 .. 1 3
Colocynth, apple	per lb.	220 0 .. 270 0	220 0 .. 240 0	220 0 .. 240 0	220 0 .. 240 0
Cubebs	per cwt.	30 0 .. 34 0	30 0 .. 34 0	30 0 .. 34 0	30 0 .. 34 0
Cumin	"	10 0 .. 12 0	10 0 .. 12 0	10 0 .. 12 0	10 0 .. 12 0
Fenugreek	"	0 0 .. 0 0	15 0 .. 17 6	15 0 .. 17 6	0 0 .. 0 0
Juniper Berries	"	7 6 .. 10 0	7 6 .. 10 0	7 6 .. 10 0	7 6 .. 10 0
Nux Vomica	"	6 0 .. 9 0	6 0 .. 9 0	6 0 .. 9 0	6 0 .. 9 0
Tamarinds, E. India	"	10 0 .. 14 0	10 0 .. 12 6	10 0 .. 12 6	10 0 .. 14 0
W. India	"	17 0 .. 20 0	17 0 .. 20 0	17 0 .. 20 0	17 0 .. 20 0
Vanilla, large	per lb.	5 0 .. 12 0	5 0 .. 12 0	5 0 .. 12 0	5 0 .. 12 0
inferior	"	60 0 .. 90 0	60 0 .. 90 0	60 0 .. 90 0	60 0 .. 90 0
FLOWERS—Dalmatian	"	95 0 .. 0 0	95 0 .. 0 0	95 0 .. 0 0	95 0 .. 0 0
Caucasian	"	24 0 .. 38 0	24 0 .. 38 0	24 0 .. 38 0	24 0 .. 38 0
HONEY, Californian	per cwt.	25 0 .. 35 0	25 0 .. 35 0	25 0 .. 35 0	25 0 .. 35 0
Jamaica	"	2 10 .. 4 0	2 10 .. 4 0	2 10 .. 4 0	2 10 .. 4 0
IPECACUANHA	per lb.	2 0 .. 4 3	2 0 .. 4 3	2 0 .. 4 3	2 0 .. 4 3
ISINGLASS, Brazil	"	1 6 .. 4 10	1 6 .. 4 10	1 6 .. 4 10	1 6 .. 4 10
Tongue sort	"	1 0 .. 4 6	1 0 .. 4 6	1 0 .. 4 6	1 0 .. 4 6
East India	"	2 9 .. 3 10	2 9 .. 3 10	2 9 .. 3 10	2 9 .. 3 10
West India	"	7 0 .. 10 0	7 0 .. 10 0	7 0 .. 10 0	7 0 .. 10 0
Russ. leaf	"	2 2 .. 2 4	2 2 .. 2 4	2 2 .. 2 4	2 2 .. 2 4
Simovia	"	0 7 .. 0 9	0 7 .. 0 9	0 7 .. 0 9	0 7 .. 0 9
JALAP, good	"	0 6 .. 0 7	0 6 .. 0 7	0 6 .. 0 7	0 6 .. 0 7
infer. and stems	"	0 0 .. 0 0	0 0 .. 0 0	0 0 .. 0 0	0 0 .. 0 0
LEMON JUICE	per deg.	2 4 .. 2 11	2 8 .. 2 10	2 8 .. 2 10	2 4 .. 2 11
LIME JUICE	per gall.	55 0 .. 100 0	55 0 .. 100 0	55 0 .. 100 0	55 0 .. 100 0
LIQUORICE, Spanish	per cwt.	12 0 .. 20 0	12 0 .. 20 0	12 0 .. 20 0	12 0 .. 20 0
Liquorice Root	"	4 6 .. 5 0	4 6 .. 5 0	4 6 .. 5 0	4 6 .. 5 0
MANNA, flaky	per lb.	75 0 .. 87 6	75 0 .. 87 6	75 0 .. 87 6	75 0 .. 87 6
MUSK, Tonquin pod.	per oz.	50 0 .. 90 0	50 0 .. 90 0	50 0 .. 90 0	50 0 .. 90 0
Grain	"	30 0 .. 40 0	30 0 .. 40 0	30 0 .. 40 0	30 0 .. 40 0
Yunan pod.	"				
OILS (see also separate list)					
Almond, expressed	per lb.	1 3 .. 1 5	1 3 .. 1 5	1 3 .. 1 5	1 3 .. 1 5
Castor, 1st pale	"	0 4 .. 0 0	0 4 .. 0 0	0 4 .. 0 0	0 4 .. 0 0
second	"	0 3½ .. 0 3½	0 3½ .. 0 3½	0 3½ .. 0 3½	0 3½ .. 0 3½
Cod-liver	per gall.	3 0 .. 4 6	3 0 .. 4 6	3 0 .. 4 6	3 0 .. 4 6

Oils:—(cont.)

		Last Month		This Month	
		£ s. d.	£ s. d.	£ s. d.	£ s. d.
Essential Oils:					
Almond	per lb.	25 0	to 0 0	25 0	to 0 0
Anise-seed, star	"	6 7	.. 6 9	6 7	.. 6 9
" German, &c.	"	8 0	.. 13 0	8 0	.. 13 0
Bergamot	"	5 0	.. 5 6	5 0	.. 5 6
Cajeput	per bot.	3 3	.. 0 0	3 3	.. 0 0
Caraway	per lb.	7 6	.. 11 0	7 6	.. 11 0
Cassia	"	3 7	.. 3 8	3 7	.. 3 8
Cinnamon	per oz.	2 0	.. 2 9	2 0	.. 2 9
Cinnamon-leaf	"	0 22	.. 0 0	0 22	.. 0 0
Citronelle	"	0 12	.. 0 12	0 12	.. 0 12
Clove	per lb.	3 0	.. 3 3	3 0	.. 3 3
Juniper	"	1 6	.. 2 0	1 6	.. 2 0
Lavender, Exotic	"	6 9	.. 8 6	6 9	.. 8 6
" Mitcham	"	60 0	.. 0 0	60 0	.. 0 0
Lemon	"	3 6	.. 5 6	3 6	.. 5 6
Lemongrass	per oz.	0 12	.. 0 12	0 1	.. 0 12
Neroli	"	7 0	.. 0 0	7 0	.. 0 0
Nutmeg	"	0 8	.. 0 0	0 8	.. 0 0
Orange	per lb.	8 0	.. 10 0	8 0	.. 10 0
Otto of Roses	per oz.	12 6	.. 25 0	12 6	.. 25 0
Patchouli	"	0 0	.. 0 0	0 0	.. 0 0
Peppermint:					
American	per lb.	12 0	.. 12 6	12 0	.. 12 6
(H. G. Hotchkiss)	"	17 6	.. 0 0	16 6	.. 0 0
English	"	27 0	.. 29 0	26 0	.. 28 0
German	"	8 0	.. 12 0	8 0	.. 12 0
Japan	"	12 0	.. 15 6	12 0	.. 15 6
Menthol crystals	"	23 0	.. 35 0	23 0	.. 35 0
Rosmary	"	2 6	.. 3 9	2 6	.. 3 9
Sassafras	"	2 6	.. 0 0	2 6	.. 0 0
Spearmint	"	12 0	.. 14 0	12 0	.. 14 0
Thyme	"	2 6	.. 0 0	2 6	.. 0 0
Mace, expressed	per oz.	0 2	.. 0 0	0 2	.. 0 0
OPUM, Turkey	per lb.	15 0	.. 17 0	15 0	.. 17 0
" inferior	"	11 0	.. 13 0	11 0	.. 13 0
QUASSIA (bitter wood)	per ton	110 0	.. 120 0	120 0	.. 0 0
RHUBARB, China, good	"	"	"	"	"
and fine	per lb.	2 3	.. 3 9	2 3	.. 3 9
Middling to fair	"	1 3	.. 2 0	1 3	.. 2 0
ROOTS—Calumba					
China	per cwt.	25 0	.. 40 0	25 0	.. 40 0
Cus-Cus	"	22 0	.. 27 0	22 0	.. 27 0
Galangal	"	0 0	.. 0 0	0 0	.. 0 0
Gentian	"	15 0	.. 18 0	15 0	.. 18 0
Orris	"	20 0	.. 24 0	20 0	.. 24 0
Pellitory	"	23 0	.. 50 0	23 0	.. 50 0
Pink	per lb.	68 0	.. 80 0	68 0	.. 80 0
Rhatany	"	1 6	.. 0 0	1 6	.. 0 0
Seneka	"	0 5	.. 0 6	0 5	.. 0 6
Snake	"	2 4	.. 2 6	2 4	.. 2 6
SAFFRON, Valencia	"	1 6	.. 0 0	1 6	.. 0 0
Alicante	"	30 0	.. 37 6	30 0	.. 35 0
SARSAPARILLA, Lima	"	20 0	.. 25 0	20 0	.. 25 0
Guayaquil	"	0 6	.. 0 9	0 6	.. 0 9
Honduras	"	1 2	.. 1 5	1 2	.. 1 5
Jamaica	"	1 2	.. 1 6	1 2	.. 1 6
SASSAFRAS	per cwt.	1 6	.. 1 10	1 6	.. 1 10
SCAMMONY, Virgin	per lb.	0 0	.. 0 0	0 0	.. 0 0
second and ordinary	"	28 0	.. 32 0	28 0	.. 32 0
SENA, Bombay	"	10 0	.. 24 6	10 0	.. 24 6
Tinnivelly	"	0 22	.. 0 0	0 22	.. 0 0
Alexandria	"	0 3	.. 1 2	0 3	.. 1 2
SPERMACEET, refined	"	0 9	.. 1 6	0 9	.. 1 6
American	"	1 3	.. 0 0	1 3	.. 0 0
SQUILLS	"	0 10	.. 0 0	0 10	.. 0 0
AMMONIAC, drop	per cwt.	0 1	.. 0 22	0 1	.. 0 22
ANIDI, fine washed	"	£ s. d.	£ s. d.	£ s. d.	£ s. d.
sorts	"	2 5	.. 2 10	2 5	.. 2 10
ARABIC, pale picked	"	15 0	.. 17 0	15 0	.. 17 0
sorts, mid. to fine	"	12 0	.. 15 0	12 0	.. 15 0
TURKEY, pick. gd. to fin.	"	2 15	.. 3 10	2 15	.. 3 10
second & inferior	"	1 10	.. 2 6	1 10	.. 2 6
sorts	"	8 10	.. 10 0	8 10	.. 10 0
ASAFOETIDA, cm. to fin.	"	7 2	.. 8 10	7 0	.. 8 10
BENJAMIN, Siam, 1st	"	5 5	.. 5 15	5 5	.. 5 15
& 2nd	"	1 10	.. 3 0	1 10	.. 3 0
Sumatra	"	"	"	"	"
COPAL, Manila	"	14 0	.. 32 0	14 0	.. 32 0
Angola, red	"	5 0	.. 10 0	5 0	.. 10 0
DAMAR, pale	"	£ s. d.	£ s. d.	£ s. d.	£ s. d.
EUPHORBUM	"	15 0	.. 75 0	15 0	.. 75 0
GALBANUM	per lb.	145 0	.. 152 6	145 0	.. 152 6
GAMBAGE, picked pipe	per cwt.	75 0	.. 87 6	75 0	.. 87 6
GUAIACUM	per lb.	10 0	.. 15 0	10 0	.. 15 0
KINO	per cwt.	0 3	.. 0 10	0 3	.. 0 10
KOWRIE, sorts	"	240 0	.. 280 0	230 0	.. 250 0
selected	"	0 6	.. 2 1	0 6	.. 2 1
MASTIC, picked	per lb.	28 0	.. 30 0	28 0	.. 30 0
MYRRH, good and fine	per cwt.	30 0	.. 50 0	30 0	.. 50 0
ordinary to fair	"	110 0	.. 200 0	110 0	.. 200 0
OLIBANUM, p. drop	"	2 9	.. 3 3	2 9	.. 3 3
amber and yellow	"	80 0	.. 140 0	80 0	.. 140 0
SENEGAL	"	39 0	.. 45 0	39 0	.. 45 0
SANDARAC	"	29 0	.. 37 0	29 0	.. 37 0
SHELLAC, Orange	"	40 0	.. 45 0	40 0	.. 45 0
LIVER	"	60 0	.. 105 0	60 0	.. 105 0
THUS	"	64 0	.. 85 0	64 0	.. 85 0
TRAGACANTH, leaf	"	58 0	.. 63 0	58 0	.. 63 0
in sorts	"	25 0	.. 0 0	25 0	.. 0 0
OILS.	"	140 0	.. 280 0	140 0	.. 280 0
SEAL pale	per ton	20 0	.. 180 0	20 0	.. 180 0

Oils:—(cont.)

SEAL, yellow to tinged..	per tun	23 0	to 24 10	23 0	to 24 10
brown	"	22 0	.. 0 0	18 0	.. 19 0
SPERM	"	53 0	.. 54 0	52 0	.. 53 0
COD	"	38 0	.. 40 0	38 0	.. 40 0
WHALE, South Sea, pale	"	20 0	.. 22 10	20 0	.. 21 0
yellow	"	22 0	.. 23 0	22 3	.. 23 0
brown	"	20 0	.. 21 0	16 0	.. 17 0
Sardine	"	25 0	.. 27 0	25 0	.. 27 0
OLIVE, Seville	per ton	38 0	.. 38 10	40 0	.. 41 0
Gioja	"	36 0	.. 37 0	36 0	.. 37 0
Levant	"	35 0	.. 36 0	35 0	.. 36 0
Mogador	"	35 10	.. 36 0	35 10	.. 36 0
Spanish	"	38 0	.. 0 0	40 0	.. 40 10
Sicily	"	38 0	.. 0 0	38 0	.. 0 0
COCOANUT, Cochinchina	"	32 0	.. 32 10	32 0	.. 0 0
Ceylon	"	27 0	.. 28 0	27 0	.. 28 0
Mauritius ..	"	0 0	.. 0 0	0 0	.. 0 0
PALM, fine	"	30 0	.. 0 0	30 0	.. 0 0
LINSEED	"	22 10	.. 23 5	22 5	.. 22/17/6
RAPESEED, English, pale	"	25 10	.. 26 0	24 15	.. 0 0
brown	"	24 5	.. 24 10	22 15	.. 0 0
COTTONSEED	"	22 15	.. 24 10	21 10	.. 23 0
LARD	"	26 0	.. 38 0	34 10	.. 37 0
TALLOW	"	28 10	.. 45 0	28 10	.. 45 0
		s. d.	s. d.	s. d.	s. d.
TURPENTINE, American	per cwt.	27 6	.. 27 9	26 6	.. 26 9
PETROLEUM, refined....	per gall.	0 6 1/2	.. 0 6 1/2	0 7 1/2	.. 0 7 1/2
Spirit	"	0 7	.. 0 7 1/2	0 6 1/2	.. 0 7 1/2
SEEDS.					
CANARY	per qr.	44 0	.. 62 0	44 0	.. 62 0
CARAWAY, English	per cwt.	0 0	.. 0 0	0 0	.. 0 0
German, &c.	"	37 0	.. 50 0	37 0	.. 50 0
CORIANDER	"	14 0	.. 23 0	15 0	.. 22 0
HEMP	per qr.	38 0	.. 0 0	38 0	.. 0 0
LINSEED, English	"	42 6	.. 0 0	42 6	.. 0 0
Black Sea & Azof ..	"	40 0	.. 0 0	40 0	.. 0 0
Calcutta	"	42 0	.. 0 0	42 6	.. 42 9
Bombay	"	42 0	.. 0 0	44 6	.. 0 0
St. Petersburg ..	"	35 0	.. 38 0	35 0	.. 38 0
MUSTARD, brown	per bush.	10 0	.. 12 0	10 0	.. 12 0
white	"	7 6	.. 9 6	7 6	.. 9 6
POPPY, East India	per qr.	37 6	.. 0 0	37 6	.. 0 0
SPICES.					
CASSIA LIGNEA	per cwt.	28 6	.. 0 0	28 0	.. 0 0
Vera	"	18 0	.. 23 0	18 0	.. 23 0
Buds	"	41 0	.. 41 6	41 0	.. 41 6
CINNAMON, Ceylon :	"	"	"	"	"
1st quality	per lb.	0 8 1/2	.. 1 9	0 9	.. 2 1
2nd ditto	"	0 6	.. 1 7	0 6	.. 1 2
3rd ditto	"	0 5	.. 1 2	0 5	.. 1 2
Tellicherry	"	0 0	.. 0 0	0 0	.. 0 0
Chips	"	0 22	.. 0 5	0 22	.. 0 5
CLOVES, Penang	"	0 11 1/2	.. 1 2	0 11 1/2	.. 1 2
Amboyna	"	0 8	.. 0 9 1/2	0 8	.. 0 9 1/2
Zanzibar	"	0 4 1/2	.. 0 5 1/2	0 4 1/2	.. 0 5 1/2
GINGER, Jam., fine	per cwt.	70 0	.. 200 0	75 0	.. 200 0
Ord. to good	"	45 0	.. 65 0	47 6	.. 70 0
African	"	30 0	.. 35 0	30 0	.. 35 0
Bengal	"	30 0	.. 35 0	30 0	.. 35 0
Malabar	"	0 0	.. 0 0	0 0	.. 0 0
Cochin	"	35 0	.. 100 0	40 0	.. 107 0
PEPPER, Black, Malabar	per lb.	0 7 1/2	.. 0 8	0 7 1/2	.. 0 8
Singapore	"	0 7	.. 0 7 1/2	0 7	.. 0 7 1/2
White	"	0 9 1/2	.. 0 10 1/2	0 9 1/2	.. 0 10 1/2
Cayenne	"	1 2	.. 1 6	1 2	.. 1 6
MAICE, 1st quality	"	1 4	.. 2 0	1 4	.. 2 0
2nd and inferior ..	"	1 1	.. 1 2	1 1	.. 1 2
NUTMEGS, 78 to 60 to lb.	"	2 6	.. 3 5	2 6	.. 3 5
90 80	"	2 3	.. 2 5	2 3	.. 2 5
132 95	"	1 7	.. 2 3	1 7	.. 2 3
PIMENTA	"	0 2 1/2	.. 0 2 1/2	0 2	.. 0 2 1/2
VARIOUS PRODUCTS.					
COCHINEAL—					
Honduras, black	per lb.	1 6	.. 1 9	1 6	.. 1 9
silver	"	1 3	.. 1 6	1 3	.. 1 6
Mexican, black	"	1 4	.. 1 9	1 4	.. 1 9
silver	"	1 2	.. 1 4	1 2	.. 1 4
Teneriffe, black	"	1 6	.. 2 0	1 6	.. 2 0
silver	"	1 3	.. 1 5	1 3	.. 1 5
GALLS, Tky blue	"	50 0	.. 52 0	48 0	.. 0 0
China	"	40 0	.. 47 6	40 0	.. 47 6
INDIGO, Bengal	"	1 9	.. 6 7	1 9	.. 6 7
Madras	"	0 5	.. 3 4	0 5	.. 3 4
Kurpah	"	0 10	.. 4 9	0 10	.. 4 9
Oude	"	1 0	.. 5 0	1 0	.. 5 0
Guatemala	"	1 3	.. 5 8	1 3	.. 5 8
ROBIN, American	per cwt.	4 3	.. 10 0	3 9	.. 10 0
SOAP, Castile	"	28 0	.. 0 0	28 0	.. 0 0
SOY, China	per gall.	1 7	.. 0 0	1 7	.. 0 0
WAX, BEES, English ..	per cwt.	£0 0	.. £0 0	£0 0	.. £0 0
Jamaica	"	6 10	.. 7 7/6	6 15	.. 7 10
East India	"	5 5	.. 7 0	6 0	.. 7/12/6
VEGETABLE, Japan	"	£3 15	.. £4 0	£3 15	.. £4 0
Paraffin	per lb.	0 4	.. 0 5	0 4	.. 0 8
WOOD, DYE, Bar	per ton	£3 5	.. 3 10	£3 5	.. 3 10
Brazil	"	7 0	.. 18 0	7 0	.. 18 0
Cam	"	16 0	.. 30 0	16 0	.. 30 0
Fustic, Cuba	"	4 0	.. 6 0	4 0	.. 6 0
Jamaica	"	4 5	.. 5 15	4 5	.. 5 15
Logwood, Campeachy ..	"	7 10	.. 8 5	7 10	.. 8 5
Jamaica	"	5 0	.. 5 10	5 0	.. 5 10
LIMA, first pile	"	8 5	.. 8 10	8 5	.. 8 10
RED SANDARS	"	5/17/6	.. 6 9	5/17/6	.. 6 9



Does the Drug Trade Pay?

To the Chemist and Druggist—

SIR,—Of late years the attention of the readers of THE CHEMIST AND DRUGGIST has been so often directed, both in verse and prose, to the above question that I feel constrained to ask for a small space in your world-read journal in order to present your readers with a brighter side of the question than I have ever seen given in your columns. About seven years ago a chemist's assistant just out of his apprenticeship, in Edinburgh, had to borrow the £2. necessary for his examination fees. Having passed his Minor, he immediately took the best situation that offered itself at the time. He was engaged to manage a small business for nine months, at 30s. per week indoors. Almost the whole of his salary was carefully saved, and at the end of the engagement he took a small grocery business, to which he added the trade of a druggist, no goodwill being paid for. Having saved over 40£., and a friend advancing 110£., this constituted his entire capital for both drugs and groceries. At the end of eighteen months the business was sold, 70£. being obtained for goodwill. After living and all other expenses were paid a net profit of 200£. remained.

With the 50£., this made 250£., with which a small drug business in a small seaport town was bought. After three years of trading the business was again sold, and a net profit remained of 440£. This, again, constituted a capital of 690£., with which a larger mixed business was bought, and in two years the net profits saved were 750£. (300£. the first year and 450£. last year), making a total in the six and a half years of 1,440£. This is, I consider, better than can be done in other trades on such a small capital. Yet we are told on all sides that the drug trade is going to the dogs. In one small town of 12,000 population, out of seven chemists, one is making over 1,000£. per year and another 800£.; probably other three are making 500£. each.

I must admit that, in the case of my friend mentioned above, he did not aim at the "classical" style of some town chemists, but sold mixed goods of any suitable kind in order to make profit, not keeping a shop merely to demonstrate to the public that pharmacy is not a trade, but a profession.

This fallacy has, in a financial way, been the ruin of too many chemists' assistants.

In which other trade can you buy for, say 200£. goodwill, an old-established business returning, say, 500£. income to the proprietor with a working capital about 500£. or 600£.? Every day, almost, there are such offered for sale.

Yours truly,

CUMBERLAND.

The Proposed Curriculum.

To the Chemist and Druggist—

SIR,—In common with many others, I have read in THE CHEMIST AND DRUGGIST several articles concerning the Minor examination, and also several articles concerning the proposed curriculum, and have drawn certain conclusions from them which the majority of your readers may not share. In the first place, I fail to see why botany should be a subject of examination for a chemist, except it is to make more of it. I cannot understand what bearing a knowledge of botany has on serving behind a druggist's counter small quantities of drugs, patent medicines, perfumery, toilet requisites, &c. For my own part, I was able to dispense and make preparations quite as well before I knew a word about botany as I did after. It is a very interesting study, I am aware, to those who like it; but I think it would have been of more real benefit to me to have spent the time I did acquiring sufficient botany to pass the Minor in learning a wholesale price-list or something connected with the business. The majority of chemists do not much care about natural orders; rent, rates, and other expenses are much more important.

In regard to the proposed curriculum and new laws relating to the examinations, I cannot help thinking it is great bosh.

A man may open a druggist's shop now, and carry on the business of a druggist, without being qualified at all, provided he does not retail a few dangerous poisons, which no one cares about, and he may be just as competent to carry on the business as one who has a qualification; and, furthermore, as he is not allowed to dispose of the poisons before alluded to, the public can buy things from his shop without fear of getting by mistake or accident some deadly poison.

Low prices, opposition of various kinds from stores and cutting shops, long credit, and other things of this kind will not be knocked out of time by an enforced curriculum. If chemists would learn to be skilful tooth-extractors it would be of greater service to the public and themselves than cramming up things which do not concern them. Dentists and doctors might not like it, but they do things chemists do not like. As the legitimate business of the chemist is not recognised or guarded by the Pharmacy Act, or likely to receive any beneficial legislation in the future, it is of no use making people go through an enforced curriculum or learn scientific subjects, when any company or individual is on quite as good or safe a footing. We often hear about counter prescribing, and some men gain a reputation for doing things quite out of their sphere of action. The wonder is that some of them do not get into trouble, for their pharmaceutical examinations demand no medical or surgical knowledge, and their qualification does not give them a licence to practise. The heavy trade can be, and is, better done by the oil and colour man than by the druggist, and he does not pass examinations. The proposed changes will not make the slightest difference to me; but to those who think they might gain some benefit by them my letter may, perhaps, put things in a different light. In conclusion, I do not think the framers of the Pharmacy Act can be complimented on their foresight or common sense; and those gentlemen who busy themselves in getting the retail chemist more scientifically educated can only be congratulated on getting their names in print as being desirous of doing something no use to anyone, except teachers and examiners. I must now conclude, and anxiously wait till your next issue to see if my letter produces any criticisms. Allow me to remain, yours truly,

SHOPMAN.

The Minor Examination.

To the Chemist and Druggist—

SIR,—That my opinions differ from your two correspondents, "Kaleidoscope" and "One of the Five Hundred," is the excuse I have for troubling your readers with this letter.

I passed through the ordeal not so many months ago, and consequently have come into contact with several students, successful and unsuccessful.

"One of the Five Hundred" would lead intending candidates to suppose that the more carelessly they go up to face the Examiners at 17 Bloomsbury Square, the more likely will they be to pass their examination. I have not yet heard of nor seen the student who has failed because he has been well up, nor am I likely to; true, I have known some who have presented themselves for examination thoroughly well up generally, and yet have been "plucked" over a very simple fault, a fault, however, which an examiner, if he overlooked, would fail in his duty to himself and to all connected with the examinations.

For example, A goes up, well up, theoretically, yet fails over a simple case of recognition in *materia medica*; probably some drug which a chemist should be constantly seeing and handling. B presents himself, able to answer almost any question in any subject, yet fails in making a box of pills, because when finished they are short in weight. A very hard case, it is true; yet how important it is that dispensers should be absolutely correct in their dispensing! C fails because he is unable to spread a plaster. D fails in botany, because he is not clear on the classes and sub-classes. And any number such examples might be given.

I feel confident that the examination is not the toss up "One of the Five Hundred" considers it to be. I remember when I was attending my course of instruction, during the few weeks before the examinations, the chances of the candidates were freely discussed by those well able to judge, viz., their fellow-students, and I noticed their prognostications were generally correct. Those who had answered their

class questions and done their laboratory work well were invariably successful, whereas those whose chances were not considered so rosy generally failed. Here, too, let me mention, I have known students present themselves against the advice and wish of their tutors, and I have never known a single one of them to pass.

Many a hard-working student has been up only to be sent down again; but we must not forget that ability varies, that many can do in three months that amount of study which it would take others nine or ten months to accomplish. There are some who study very very hard, yet cannot retain what they have learned. I have listened with feelings of sorrow to the tale of a friend who has been sitting up night after night burning the midnight oil, trying to drive into his unwilling brain the necessary knowledge, and yet finds himself but very little wiser after all his exertions; another would have accomplished the same amount of study in a third or even a fourth part of the time.

As to the examiners being anxious to keep as many out of the business as possible, experience tells me the reverse is the case. Considering the short time occupied by the examination, the examinations are conducted remarkably well. If a little longer time were occupied, probably it would be an improvement, especially with the dispensing, though an examiner in the latter subject can tell the capabilities of a candidate by the way he sets about his work, and no doubt takes that into consideration as well as the result of his work.

I myself can speak very highly of the gentlemanly way in which I was treated, and the consideration shown me. I have also heard many a student speak of an examiner having in some kind way helped him in a difficulty, when through nervousness or perchance ignorance he found himself at sea. One case in particular I call to mind. Being asked to test hydrocyanic acid he applied the reagents in the wrong order. The examiner kindly hinted to him to try another way; he did so, and was successful in proving the presence of hydrocyanic acid. I am, sir, your obedient servant,

THETA.

SIR,—In your last number "One of the Five Hundred" states that "the silver metallist under Professor Attfield at the Square school got 'ploughed' in chemistry."

As silver metallist of the present session I have had several inquiries as to the truth of the above statement, which, if it refers to me, is incorrect, as I had not the misfortune to get "ploughed for chemistry."

Kindly insert this letter in your next issue, as the statement above referred to is prejudicial to me in my present capacity as analyst to a wholesale firm.

ED. H. FARR.

27 Claremont Road, Cricklewood, N.W., September 9.

26/48. **Pharmaceutical Slavery.**—A *Fourteen-hours-a-day Assistant* sends us a long letter in support of the views expressed last month by "W. G. B." The letter is written on both sides of the paper, and, apart from any vigorous advocacy, does not present any novel ideas. We shall be glad to see chemists' shop hours reduced, but it must be remembered that the contract between the master and the assistant is a voluntary one, and we see no analogy between the condition of the latter and that of a slave. Any way, we question if the cause of early closing would be promoted by allusions to the "old fogies who batten on the physical and mental ruin of those who are unfortunate enough to be driven by their necessity to become their assistants."

13/50. *C. B. U.* also sends a letter on this subject. "Chemists' assistants," he says, "are working the mind at the expense of the body, and the result in the future must be a race of highly intellectual men perhaps, without strength or energy to carry out their ideas." He thinks if the matter be placed before employers in a proper manner, they would soon see the fairness of the request for more leisure time.

24/51. *Haja* also sends us a letter in support of "W. G. B.'s" remarks. "*Haja*" complains that apprentices and assistants get no time to attend lectures, and when they have done their day's work (at nine or ten o'clock—generally the latter) they do not feel inclined to dip into the "mystic lore" of Attfield, but are driven to what "W. G. B." mentions,

and many are ruined in consequence. The trade is, no doubt, in a sad state, and if principals want assistants they should, or might, give lenient hours. "*Haja*" also advocates that longer salaries should accompany shorter hours.

Comments and Criticisms.

To the Chemist and Druggist—

SIR,—Please allow a few remarks on several subjects in your last issue.

First, the quotation from the *Chemiker Zeitung*. Anything more preposterous than the suggestion about "chemical traitors," I think, is rarely to be met with.

What a contrast to the non-secret medicines which are now coming into vogue! Pray, what is the use of knowledge, either acquired or discovered, if it is a crime to put it into practice? Such teaching as the *Zeitung* puts forth is well calculated to diminish both the influence and circulation of that journal.

Secondly, as to the Minor. How is it that no one can pass this examination until his third appearance at the Square, and why are no more than seven candidates permitted to pass each time? I may be wrong, but this is the light in which I see the matter.

Thirdly, poisonous prescriptions. One cannot but wonder at the fondness of medical men for deadly poisons. This is the case particularly with Irish gentlemen. I have dispensed for four of these latter, and I think that 80 per cent. of their prescriptions contained either liq. strychnia, morphia, belladonna, liq. atropia, acid. hydrocyanic, or some other dangerous article.

Lastly, trade with Spain. Perhaps some day chemists and others will have to thank you for the article on this subject. In years gone by Spain was our most formidable enemy on the sea, and, as if history must repeat itself, Spain is likely to be our very formidable rival. A short time ago, when residing at Liverpool, I noticed what splendid vessels were engaged in the Spanish trade, and I learned that some of the finest English ships are bought up by Spanish merchants, who, it was said, were taking all the trade out of our hands. Perhaps they do not have trades union congresses in Spain, and, therefore, the workpeople are not so tyrannised over as they are in this free (?) country. Yours &c.,

Manchester, September 9.

SNIFT.

Nero.—The label you send would not, in our judgment, subject the preparation to stamp duty. But it would become liable if, by other printed or written circulars, or advertisements, you recommended the article for the relief or cure of a disease. We see no reason why you should not enclose with each bottle a circular referring exclusively to other medicines which may or may not be liable. But, to be quite sure, you had better send a bottle, fully packed, to the Board of Inland Revenue for their opinion.

28/49. *B. F. G.* asks how to bleach the ivory handle of an umbrella, chloride of lime, peroxide of hydrogen, permanganate of potash with hyposulphite of soda and oxalic acid, having no effect on it.

The darkening is due to the fatty matter of the ivory. To bleach it you would imperil the appearance of the handle, and the polish would be lost. We think you would do best to let it alone. Boiling with a mixture of carbonate of soda and lime would do what you require.

11/50. *Subscriber* (London, Ontario).—*Begbie's Mixture*, as sold in Edinburgh, is thus composed:—

Acid. nitric, dil.	..	..	..	..	3iiss.
Acid. hydrocyanic, dil.	..	..	..	..	3j.
Glycerine	..	..	..	..	3vj.
Inf. quassia	..	..	..	..	ad 3vj.

7/49. *Yokohama.*—*Iodine Tincture for Blistering Horses.*—

Iodine	..	..	..	..	..	3j.
Methylated ether	..	..	..	..	..	ad 3j.

49/69. *Durham.*—We do not think your label is at all an infringement of the other one you send. Of course we cannot guarantee that the other maker would not so regard it, but

we do not see on what reasonable ground he could proceed against you. It is not necessary to have Messrs. Calvert's permission to sell a preparation of carbolic acid. You cannot satisfactorily protect your label by any registration; but if you create a property in the article a court of equity would give an injunction against other makers who might try to pass off their products as yours.

6/50. *Durham* has been asked by a glass-writer for a white acid used in embossing; said it was not fluoric.

We can only suggest that your customer may have referred to the process of etching by applying sulphuric acid to the design drawn on the waxed surface, and afterwards sprinkling fluor spar over it.

6/50. *Durham*.—**Essence of Rennet**.—The directions which you quote from the *Diary* imply a precaution merely. The excess salt referred to may be rejected altogether.

44/55. *Ajax*.—**Hop Bitters**.—We quote from our files three formulæ for bitter preparations containing hops, but we cannot say how near either comes to the celebrated proprietary article:—

I.

	Hop, gentian, dandelion, camomile, stillingia,	Parts
orange-peel (of each)	2
S.V.R.	64
Syrup	16
Water	76

II.

Tinct. humuli	.. .. .	½ oz.
„ buchu, senega (of each)	.. .. .	3 drachms
Podophyllin (dissolved in S.V.R.)	.. .. .	½ „
Tinct. cocci	.. .. .	20 drops
Water	.. .. .	1 pint

III.

Tinct. nucis vom.	.. .. .	3j.
„ buchu	.. .. .	3j.
„ aurant.	.. .. .	3ij.
„ humuli	.. .. .	3iv.
Inf. quassia conc.	.. .. .	3iij.
„ calumbæ	.. .. .	3iij.
„ gentian	.. .. .	3iij.
Aq. chlorof.	.. .. .	ad 3vj.

In each case the dose would be about a tablespoonful.

46/54. **Washing Liquids**.—*Drysalter* wishes us to help him in the production of a **Laundry or Washing Cream** “which is gaining favour in preference to dry soap, because it cleanses without injuring textile fabrics.” Our correspondent states that the cream contains ammonia and turpentine, but differs from our No. 2 formula of last month in being a better emulsion. The following is the formula desired:—

Turpentine	.. .. .	Oz.
Strong solution of ammonia	.. .. .	20
	.. .. .	10

Put into a stoppered Winchester and shake occasionally during twenty minutes, then add the following solution gradually and with brisk shaking:—

Soft soap	.. .. .	Oz.
Water	.. .. .	1
	.. .. .	50

(Dissolve the soap in 10 oz. of the water by the aid of heat.)

47/43. *K. N.*—**Tasteless or Sweet Cayenne**.—This capsicum is now in common request for improving the plumage of canaries. The pods are very large—some are as much as 6 inches or more in length—and vary in colour (according to their origin) from bright scarlet to dark violet. Seedsmen stock the pods; but should our correspondent fail to obtain them locally, he should apply to Messrs. Christy & Co., Fenchurch Street, London. The pods are imported from South America, we understand, but as to the species which yield them we have no accurate information, the names being more empiric than otherwise. Some kinds of *C. annuum* are

almost tasteless, and Hungarian pepper (*C. tetragomum*) is remarkably free from pungency; but neither of these has the oily richness of the bird cayenne.

46/40. **An Unsightly Mixture**.—*F. M. C.* writes:—What ought to be done with the following mixture?—

Quiniae sulphatis	.. .. .	gr. xij.
Potassæ citratis	.. .. .	3ij.
Acid. hydrobrom. dil.	.. .. .	3ij.
Syrup. aurantii	.. .. .	3iv.
Aquæ	.. .. .	ad 3vj.

Misce et fiat mistura.

“The quinine was dissolved in some water with the acid, the citrate dissolved and added, and, lastly, the syrup. It presents a most unsightly appearance, due to the quinine citrate, I presume, being insoluble in so small a quantity of acid. If more acid is added the precipitate disappears. Would this be allowable, or should it be sent out with a ‘shake-the-bottle label?’

Our correspondent correctly assumes the precipitate to be quinine citrate, but with spring-water calcium citrate is formed, and an insoluble potash salt is also possible. As at least double the quantity of hydrobromic acid is required for a clear mixture, such modification of the prescription should not be made without the authority of the prescriber. The best plan is to rub down the quinine with the citrate and enough distilled water to make a paste. Then the acid, diluted with an ounce of water, should be added gradually and with constant stirring, then the syrup and the rest of the water. In this way the precipitate is got in a state of fine division, and it does not adhere to the sides of the bottle. A “shake-the-bottle” label should be attached.

46/47. **Solutio Copaibæ Alkalinæ**.—*Micamber* (Birmingham), in reply to “W. H. B.,” sends the following, taken from Beasley’s “Pocket Formulary,” which, he says, makes a bright solution perfectly miscible with water:—

Balsam copaibæ	.. .. .	3ij.
Liq. potassæ	.. .. .	3iv.
Aq. destill.	.. .. .	3x.

Boil together, and, when cooled to 140° F., add

Sp. ether. nitrosi	.. .. .	3j.
Aquæ	.. .. .	ad 3xvj.

Allow it to stand for two or three days, then separate the clear solution from the sediment and what floats on the surface by syphon.

“I would also suggest that liq. copaib. et buchu vel liq. copaib. et matico might be easily made from the above by using the concentrated infusion of buchu or matico.”

The Irish Examinations.

To the Chemist and Druggist—

SIR,—Allow me a small space to call the attention of the Pharmaceutical Society of Ireland to the utter inadequacy of their final examination as regards pharmacy theoretical and practical.

Firstly, the time devoted to the practical part is too short; secondly, the present arrangements allow candidates to assist each other, as well as correct their own errors, as the examiner is engaged with one candidate at the oral, whilst other candidates are dispensing without supervision. Thirdly, the scope in dispensing is entirely too limited, candidates being rarely asked to dispense more than one simple mixture, a set of pills, a blister for the “right ear,” and very seldom to spread a plaster. Now I consider dispensing the most important portion of the examination; but the present examiner seems to lay more stress on the reading of prescriptions in correct Latin, and giving the proper pronunciation and case-endings of words, whilst the most faulty dispensing seems to elicit neither remark nor comment.

I have heard candidates ask what amount of heat was necessary to spread a plaster, and how they would know when the iron was sufficiently heated. Yet these gentlemen satisfied the examiner, and passed.

I consider that each candidate should be asked to dispense

at least one prescription requiring something more than an elementary knowledge of the art; also that he should have to prepare suppositories, pessaries, and such other compounds as are met with in the daily practice of the profession.

I would also suggest the propriety of having an independent person present during the examination, especially when candidates present themselves who are employed in the establishment of the examiner, or one with which he is intimately connected, or otherwise interested in.

I am, sir,

Your obedient servant,

Dublin, AN IRISH PHARMACEUTICAL CHEMIST.

August 16.

48/8. R. B. II.—Mercurial Blister for Horses.—

	Parts
Red iodide of mercury	1
Lard	7

Mix.

A stronger ointment is sometimes required; it contains 1 in 5.

48/58. A. C. S.—Startin's Lotion.—

Oxide of zinc	2 drachms
Calamine (prepared)	2
Precipitated sulphur	1
Glycerine	3
Rose water, to	2 cz.

Mix.

The mercuriated lotion contains 1 grain of sulphate of mercury added to the above.

The lotion is to be dabbed on the part affected night and morning.

48/29. Sapo.—Soap Bubbles.—The soap solution may be made by dissolving $\frac{1}{2}$ oz. of crown pale yellow soap in a pint of hot water. When required for use two tablespoonfuls of this solution are to be mixed with half a teacupful of warm water and used warm. The various aniline dyes may be used to colour, but none of these will equal the brilliancy of the natural colour of the soap bell. A strong-lunged boy and a good clay pipe will do the rest. Hydrogen is employed to produce very light bells.

47/64. V. A. (Madrid).—The Taste of Cod-liver Oil is usually disguised with essential oil of bitter almonds. Other essential oils, such as cinnamon, may be employed. A good result is obtained by mixing 5 drops of oil of cinnamon and 1 c.c. of chloroform with each litre of oil.

Ess. Ment. Pip.—Messrs. Spies Brothers, referring to the note from "B." in last issue, assert that Cooking's steam-refined Japanese oil of peppermint makes a beautifully bright essence of peppermint.

49/59. John Thomas.—The wording of the Pharmacy Act is sufficient, we think, to justify the Pharmaceutical Council in charging a reasonable fee for re-registration. Whether a guinea is reasonable or not we are not qualified to decide.

21/50. Quærens.—You will find particulars about the patent for Nubian Blacking in THE CHEMIST AND DRUGGIST for May, 1884, page 250.

27/49. J. J.—See under Educational Information in this number what you have to work up for. Living in Edinburgh, you need have no difficulty in finding opportunities for instruction. Meanwhile, study Ince's Latin Grammar, Attfield's "Chemistry," and Bentley's "Botany," and make yourself very familiar with the new Pharmacopœia.

46/71. Semper Vivens writes:—Can you solve the following problem? I shake up (at intervals, for about six hours) 80m. ol. menth. pip. (Hotch.) in 80 oz. aq. pur.

(not dest.). Leave in stock-bottle it keeps well. Filter, and keep in shop-bottle, and it turns, after a time, to a brilliant red fluid. This has happened several times. The colour is so vivid that I thought at first it was due to a crystal of pot. permang.

The Lavender Water Query.—W. P. C. (Birmingham) says:—If "W. P." will shake up his aq. lavand. with a little liq. plumbi fort., say 5j. ad Oj., he will, I think, find the colour renewed sufficiently for it to be saleable after again filtering or decanting. I had similar trouble with some two years ago, and found this method effective.

T. W. (Sunderland) says:—"We had some lavender water that went quite deep golden colour, and the only thing that bleached it was acid. nitro. muriat. dil. It takes very little—about 5ij. to the gallon, I think, was what we used—and it had a good effect. It does not hurt the water for handkerchief purposes, &c."

To "T. W."—We hope before long to have the opportunity of adopting your suggestion.

47/53. H. C. B.—To Clarify the Honey, your best plan is to heat on a steam-bath just long enough to render it fluid, then strain through a wetted felt bag. We never heard of any straining-machine for the purpose.

46/72. A Question of Carriage.—P. S. writes from New castle-on-Tyne:—I sent a hamper, per the North-Eastern Railway, to a party at Tyne Docks, carriage paid, and marked glass, containing some bottles of oil and also some parcels of dry goods. In carriage two of the bottles were broken, and the contents spoiled some parcels of cream tartar. On arrival the consignees signed for the hamper as damaged, and also sent me a list of the articles spoilt to send in a claim to the company. I did so; but the company decline to pay it, on the ground that they are only liable for the two bottles, and not for the damage done to anything else, as the dry goods should have been in another hamper. The company have since offered to pay half the claim sent in. Please give your opinion in the matter, it being the rule of the trade to pack glass along with soft goods and mark the hampers "Glass."

A railway company has power to make by-laws and regulations as to the carriage of goods and the packing thereof in order to facilitate the safe carriage of all goods carried therewith; and if you did not break any of such regulations of which public notice had been duly given, you are entitled to compensation for the damage which has been done to your goods. But if you have committed any breach of any lawful and reasonable rule you would not succeed in an action against the company; but we think the offer to settle on any terms shows that the company admit their liability. Even in case of a special contract having been signed the conditions of such contract must be reasonable, and any attempt to exclude the responsibility of the company for injuries occasioned by the negligence or misconduct of any of their servants would be illegal and void as being unreasonable. The injury appears to have been occasioned by the negligence of some person employed by the company, it not being asserted that the goods were not carefully packed; and, therefore, we are of opinion that you are entitled to recover, unless you have broken any such rule as we have already referred to.

Chemists.—Dispensers are not generally carried on merchant ships. The captain deals out what physic is necessary. For service in the Royal Navy as dispenser apply for particulars to the Admiralty Office, Whitehall.

ERRATUM.—In the formula for Liq. Hypophosph. Co. given last month, for *mangan. sulph.* read *magnes. sulph.* It is as well to add that the solution is far too strong for keeping. A sulphate and hypophosphite together in one solution are sure to give off sulphuretted hydrogen sooner or later.

N.B.—A few queries are unavoidably held over till next month.

PURE OXIDE OF ZINC (HARRIS & CO.'S)

In 1-lb., 2-lb., 4-lb., 7-lb., 14-lb., and 28-lb. Boxes, 1/- lb. Special quotations to large buyers.

N.B.—EVERY PACKAGE HAS OUR SEAL UPON IT.

Great care is used in the preparation of our Oxide of Zinc, and it is snperior to the ordinary Oxides sold as B.P., which frequently contain Arsenic and Sulphate of Zinc in sufficient quantities to prove irritating to the skin.

PHILIP HARRIS & CO., Manufacturing Wholesale and Export Chemists, **BIRMINGHAM.**

CRYSTAL PALACE BOND'S GOLD MEDAL MARKING INK.

(Prepared by the Daughter of the late John Bond.)

SIXTEEN PRIZE GOLD and other MEDALS AWARDED, besides Numerous Diplomas and Certificates



Packed more elaborately than ever. Order the New One Dozen Show Card.
The best-displayed article we have seen.—Vide Trade Notices.



WORKS: 75 SOUTHGATE ROAD, LONDON, ENGLAND.

ALMANACS FOR 1886.

CHEMISTS issuing Almanacs are requested to send specimen copies, price per page, and terms for advertisements to

Mr. THOS. COLMAN, Advertising Agent, 161 Strand, E.C.

Friedrichshall.

THE WELL-KNOWN APERIENT MINERAL WATER.

“Most suitable for *PROLONGED* use.”—Professor SEEGEN.

“The *LONGER* Friedrichshall is taken the *SMALLER* is the quantity necessary to effect the purpose.”—Sir HENRY THOMPSON.

“Most efficacious ; to know it is to appreciate its high value.”—Baron JUSTUS VON LIEBIG.

OF ALL CHEMISTS AND MINERAL WATER DEALERS.

MELBOURNE,



1880.

ADELAIDE,



1881.



TRADE MARK.

BRIGHTON,



1881.

NEW ZEALAND,



1882.

CORBYN, STACEY & CO.

Wholesale & Export DRUGGISTS, MANUFACTURING, PHARMACEUTICAL, AND ANALYTICAL CHEMISTS.

PRICES CURRENT FORWARDED ON APPLICATION.

Special Quotations for Large Quantities or Original Packages.

Laboratories Drug Mills, Warehouses, and Head Office: 300 High Holborn.

Branches: 86 New Bond Street; 7 Poultry; 153 Leadenhall Street.

NEW ACCOUNTS should be accompanied with Draft or London Reference.

300 HIGH HOLBORN, LONDON.

Silver Medal at Inventions Exhibition 1885.



Established
1798



Howards & Sons

FLUID EXTRACT OF CINCHONA,

made from C. Califaya, or C. Succirubra, containing the whole alkaloidal contents of the bark.

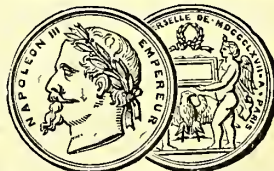
QUININE, CINCHONA ALKALOIDS,

Acids, pure.
Æthers, pure & methylated.
Antimony preparations.
Benzoic Acid & Benzoates.
Bicarbonate of Soda (Howards').
Bismuth preparations.
Borax & Boracic Acid.
Bromides of the Alkalies.
Camphor Bells, Blocks, & Flowers.
Cocaine Hydrochlorate.

Citrate of Iron & Quinine, P.B.
Citric Acid & Citrates.
Corrosive Sublimate.
Iodides of the Alkalies.
Iodoform.
Magnesia.
Mercurials, Calomel, &c., &c.
Morphia Salts.
Rochelle Salt & Pulv. Seidlitz.
Spirit preparations.

AND OTHER PHARMACEUTICAL CHEMICALS.

Stratford, Essex.



Detailed Price Lists on application.

TO CHEMISTS ABROAD.

Before making up your indents peruse carefully the **ILLUSTRATED EXPORT PRICES CURRENT**, issued by us, of **OVER 200 PAGES**, containing Prices of Drugs, Chemicals, Pharmaceutical Preparations, &c., as also of Druggists' Sundries and Surgical Instruments, now largely added to. Issued in **ENGLISH**, January and July; **SPANISH**, April and October.

PARTICULAR ATTENTION IS CALLED TO THE FOLLOWING—

BOTTLED OILS, specially put up for export.

COATED TASTELESS PILLS (EVANS').

EFFERVESCENT MONTSERRAT SALINE.

EVANS' FLUID EXTRACTS.

FOSSILINE, WHITE and YELLOW. A bland, odourless, perfectly pure Hydrocarbon Jelly of greater smoothness, firmer consistency, and better appearance than any other Petroleum Jelly. It is not crystalline, but is a Homogeneous Jelly. Invaluable as a basis for Ointments, Pomades, &c. It does not rancify, and is not surpassed by any known substance as a dressing for Wounds, Cuts, Bruises, Burns, Hemorrhoids, Skin Diseases, &c.

GRANULAR PREPARATIONS. Having special plant for the manufacture of these, we can offer advantageously.

HAWLEY'S COUNTER ADJUNCTS. (See Advertisement.)

MONTSERRAT LIME-FRUIT JUICE, CORDIALS, and SAUCE. (See Advertisement.)

OLEUM RICINI SINE SAPORE (Evans').

SAVARESSE'S CAPSULES ORGANIQUES.

SAVAR'S MEDICAL, TOILET, and HOUSEHOLD REQUISITES.

SAVAR'S CUBEB CIGARETTES.

Our Manufacturing Department (including the Mills and Laboratories situated in Fleet Street, Liverpool) contains every modern adaptation of apparatus and machinery; we have therefore confidence in recommending Chemical and Pharmaceutical preparations of our own manufacture, and can guarantee their purity and genuineness.

LONDON:

EVANS, LESCHER & WEBB.

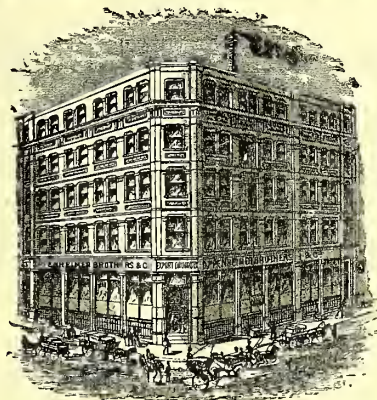
LIVERPOOL:

EVANS, SONS & CO.

CANADA:

EVANS, SONS & MASON (Limited), Montreal and Toronto.

OPPENHEIMER BROS. & CO.



Alkaloids; Essential Oils;
Scale and Granular Preparations;
Tinctures and other Alcoholic
Preparations in Bond.

Patent Medicines;
Druggists' Sundries;
Surgical Instruments and Appliances,
&c., &c.

WHOLESALE DRUGGISTS AND MANUFACTURING CHEMISTS.

MANUFACTURERS OF
PHARMACEUTICAL, CHEMICAL, & PHOTOGRAPHIC PREPARATIONS.

PRICES CURRENT FORWARDED ON APPLICATION.

Special Quotations for Large Quantities or Original Packages.

SOLE PROPRIETORS and Manufacturers of

LIQ. EUONYMIN ET PEPSIN CO.

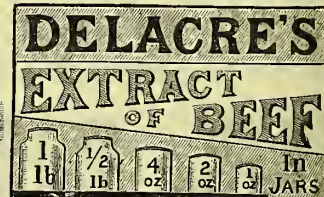
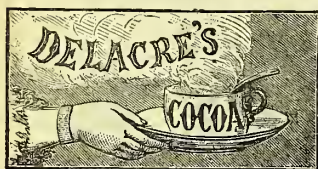
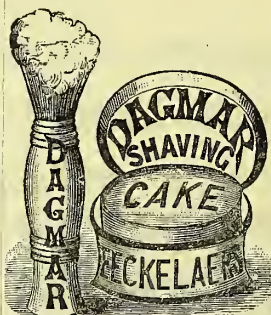
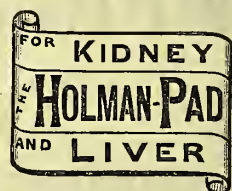
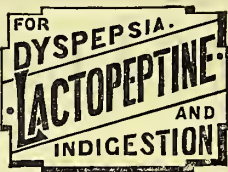
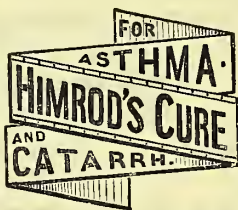
(OPPENHEIMER'S).

OPPENHEIMER BROS. & CO., 1 & 3 SUN STREET, LONDON, E.C.

TO CHEMISTS AND DRUGGISTS,

HOME AND FOREIGN.

PRICE LISTS and TRADE TERMS for the following PROPRIETARY ARTICLES can be had on application, enclosing Business Card, to JOHN M. RICHARDS, Depot for American Medicines, 46 Holborn Viaduct (late Great Russell Street), London, E.C.



Show Cards and Printed Matter will be supplied on request.

NOTE NEW ADDRESS:
46 HOLBORN VIADUCT, LONDON, E.C.



FOR PREVENTION, RELIEF, AND CURE OF
GOUT, RHEUMATISM, COLDS, NEURALGIA,
 AND ALL NERVOUS DISORDERS.

Consisting of Flannels, all Descriptions of Underclothing, Chest Preserverg
 Knee Caps, Knitting Yarn, Wadding, Pine Needle Oil for Embrocation,
 Bath Extract, Soap, &c. &c.

CAUTION.—None Genuine without
 Trade Mark and Signature.

SOLD BY ALL CHEMISTS AND DRUGGISTS.

WHOLESALE OF ALL DRUGGISTS' SUNDRIES, &c.

Sole Exporter, **ERNEST GUTMANN, KARLSRUH (BADEN).**

Lairitz

JULIO STÜRUP & CO., Puerto Cabello, VENEZUELA, **CHEMISTS, PHARMACISTS, AND WHOLESALE DRUGGIST.**

GENERAL AGENTS FOR PATENT MEDICINES AND PERFUMES,

And Proprietors of GENIS & BARCON'S RENOWNED CHOCOLATE MANUFACTORY. The best Chocolate and
 Pure Cacao Paste, with the Celebrated "Caracas" Cacao. Prices, 2s. 6d., 2s., and 1s. 6d.

EISNER & MENDELSON, IMPORTERS AND EXPORTERS OF **FOREIGN & DOMESTIC HERBS,** ROOTS, DRUGS, **CHEMICALS & PATENT MEDICINES**

Consignments and Agencies solicited. Highest references furnished.
 Sole Agents for the U.S. for Johann Hoff's Malt Extract.
 " " " H. Trommsdorff's Chemicals.

818 & 320 RACE STREET, PHILADELPHIA, PA.

E. FOUGERA & CO.,

No. 30 NORTH WILLIAM STREET,
NEW YORK, U.S.A.,

Importers of and Agents for the Principal
FOREIGN MEDICINAL PREPARATIONS
AND SPECIALTIES.

AGENCIES AND CORRESPONDENCE SOLICITED.

FOREIGN SPECIALITIES AND MEDICINES.

REVISED PRICE LIST.

ROBERTS & CO.,

FOREIGN AND ENGLISH CHEMISTS, WHOLESALE, IMPORT, AND EXPORT AGENTS FOR
FOREIGN MEDICINES AND PATENTS,

76 NEW BOND STREET, LONDON.

Messrs. Roberts & Co. beg to inform the Trade that they are Agents for all the principal French and Foreign Specialities
 and Medicines, a large supply of which they have always on hand, and can supply on very favourable terms. They are in
 daily communication with their Paris House, and can offer exceptional facilities for procuring New Medicines, &c., &c.,
 with very little delay.

The following is a list of a few that they name *au hazard*, and that have a large sale:—

Retail	Per doz.	Retail	Per doz.	Retail	Per doz.	Retail	Per doz.
4/6..Alcool de Menthe Ricques ..44/		4/6..Capsules Matico	33/	2/3..Guyot's Goudron	18/	7/0..Rabuteau's Elixir Ferrug. ..65/	
2/9.. Ditto ditto	24/	4/6.. " Raquin	30/	11/..Laville's Gout Tincture	90/	2/9.. " Sirop	27/
2/9..Anbergier's Syrup	27/	4/6.. " Mathey Caylus	28/	11/.. " Pills	90/	4/0..Racahout	30/6
1/9.. " Pâte	16/	4/6..Chassaing's Wine	38/6	2/3..Papier Fayard	13/6	4/6..Reynal's Bougies	42/
6/6..Bay Rum	54/	2/9.. " Pills	24/6	1/11 Ditto	7/	2/9..Ricord's Injection	24/
8/8.. Ditto	27/	4/6..Clin's Bromide Cam.Dragées 45/		4/..Papier Fruneau	27/	4/6.. " Capsules	38/
2/0..Belloc's Charcoal	14/	5/0..Rau Botot	38/	2/3.. Ditto	15/	8/0.. " Syrup ..72/; 2/9; 26/	
1/9.. " Lozenges	13/	3/0.. "	24/	1/9..Pâte Anbergier	14/6	1/6..Star Paper	12/
4/6..Blancoard's Pills	30/	2/6..Repic's Cigarettes	14/	2/0.. " de Berthé	16/	2/9..Vallet's Pills	22/
2/6.. " Ditto	18/	5/6..Elixir de Coca	48/	2/9.. " de Coca	23/	1/9.. " Ditto	14/
4/8..Bron's Injection	27/	2/9..Flon's Syrup	23/	1/9.. " de Georgé	13/	4/6..Veloutine (White,Pnk,Yel.) 39/	
4/8..Bugeaud's Wine	35/	2/0..Gayetty's Paper	16/	1/11 " Ditto	8/6	3/9.. " ditto	30/
4/6..Bully's Vinegar	30/	2/3..Granules Arsen. Acid	15/	1/9.. " de Nafé	18/	3/9..Vichot's Trochisques	22/
2/6.. " Ditto	15/	2/3.. " Iron	15/	1/9.. " Regnaud	13/	4/6..Valentine's Meat Juice	38/
4/8..Candé's (Lait Antéphilique) 36/		2/3.. " Soda	15/	7/0..Pierlot's Valerian	60/	4/6..Vin de Coca Mariani	44/6
4/6..Capsules Bromide of Camph.46/		2/9..Grimault's Syrups	24/	2/9..Rabuteau's Dragées Ferrug 28/			

Special Quotations in large quantities.

*MM. Roberts & Co. ont l'honneur d'informer MM. les Pharmaciens Spécialistes de France et de l'Étranger qu'ils se mettent
 leur disposition pour des dépôts qu'ils voudraient établir à Londres. On peut avoir tous renseignements en s'adressant à leur
 maison de Londres ou à Paris.*

SPECIAL AGENTS FOR MARIAN'S ELIXIR, EXTRACT PATE, PILLS, SYRUP AND WINE OF COCA, AND FOR VALENTINE' MEAT JUICE
 AND LE GRAND'S ORIZA PERFUMERY.

Established] House in Paris, ROBERTS & CO., Place Vendome 20.

[1823.

KEMPTHORNE, PROSSER & CO.,
NEW ZEALAND DRUG COMPANY, LIMITED,
 Wholesale Druggists,
MANUFACTURING CHEMISTS, AND COMMISSION MERCHANTS,
 Head Office and Factory, **DUNEDIN.**

BRANCH HOUSES:

High Street, CHRISTCHURCH,
Hunter Street, WELLINGTON,
Shortland Street, AUCKLAND,
Patent and Proprietary Medicines Agency.



NEW ZEALAND.

London Agents—

Messrs. GRIMWADE, RIDLEY & Co., 82 Bishopsgate Street.

ROCKE, TOMPSITT & CO.,
WHOLESALE DRUGGISTS,
MELBOURNE,
 AND
119 & 120 LONDON WALL, E.C.

Samples and Quotations solicited.

Agencies undertaken on the most advantageous terms.

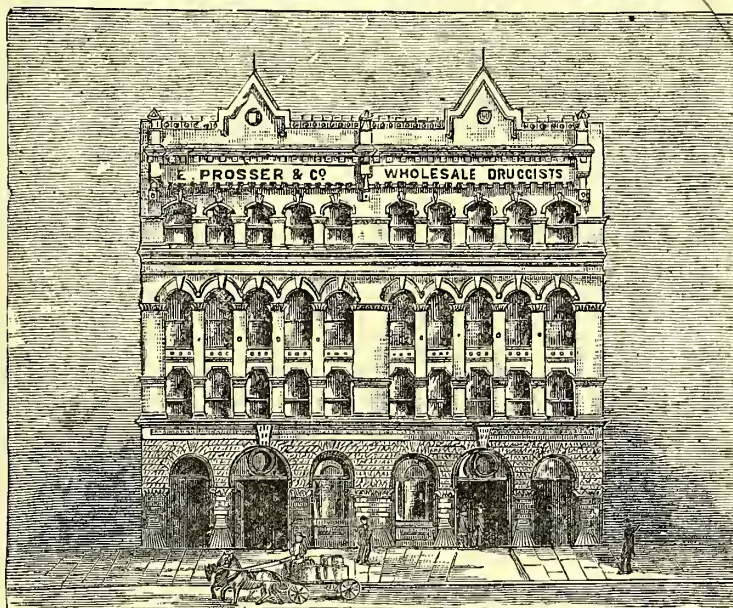
Wholesale Depot for Sander & Son's Pure Volatile Eucalyptus Oil (Eucalyptol), and Importers of Oil of Eucalyptus.

Wholesale Agents—Messrs. Hodgkinson, Prestons & King, 81 Bishopsgate Street Without, E.C.

S. HOFFNUNG & CO.,
SYDNEY AND BRISBANE
 (N. S. WALES). (QUEENSLAND)
GENERAL MERCHANTS & IMPORTERS.
 SPECIAL DEPARTMENT FOR
PERFUMERY, PATENT MEDICINES & DRUGGISTS' SUNDRIES.
London House: H. NATHAN & CO., 13 Basinghall Street, E.C.

E. PROSSER & CO.,

IMPORTERS OF PATENT MEDICINES, DRUGGISTS'
SUNDRIES, DYE GOODS,
SURGICAL INSTRUMENTS, PERFUMERY,
FANCY SOAPS, SPONGES.



IMPORTERS OF BRUWARE, CORDIAL MAKERS,
MACHINERY, CORKS, BOTTLES, LABELS,
PHOTOGRAPHIC CHEMICALS AND MATERIALS.

Wholesale Druggists, 19 & 21 O'Connell Street, SYDNEY.

Agencies for Patent Medicines and other Goods solicited. Travellers cover New South Wales and Queensland.

London Agents: LAUGHLAND, MACKAY & BAKER, 85 Gracechurch Street, E.C.

FELTON, GRIMWADE & CO.,

Wholesale Druggists and Manufacturing Chemists,
MELBOURNE, VICTORIA.

LONDON AGENTS:—

Messrs. GRIMWADE, RIDLEY & CO., Mildmay Chambers, 82 Bishopsgate Street.

Wholesale Agents for Bosisto's Genuine Oil of Eucalyptus.

F. REED & CO., WHOLESALE & RETAIL DRUGGISTS,

Dispensing and Homœopathic Chemists,
**DURBAN AND POINT,
PORT NATAL, SOUTH AFRICA.**

GENUINE THIBET MUSK.

"PHENIX"
BRAND,



SEASON
1883.

Grained, and
Guaranteed Pure by
SYMES & Co.,
The Viceroy's Chemists,
SIMLA (HIMALAYAS).

Symes & Co.

MUSK of the above Brand is received direct from SIMLA (in GRAIN only).
It is now put up in bottles of only one size, each containing ½ oz. avoirdupois.
PRICE, 2s/4; two bottles, 4s/1; four bottles, 8s/1. For 4 oz. (16 bottles) and upwards,
80/ per ounce.

LYNCH & CO., 192 Aldersgate St., LONDON.

B. KEITH & CO.,

MANUFACTURERS OF

PURE CONCENTRATED MEDICINES, CONCENTRATED TINCTURES, ETC.

We make a full line of RESINOIDS, such as **PODOPHYLLIN, LEPTANDRIN, EUONYMIN, IRISIN, HYDRASTIN, &c., ALL PURE.**

So-called Concentrations are in the market, called by the same name as manufactures, that are made by triturating extracts etc., with sugar of milk, powdered root, etc.

WHAT ARE CONCENTRATED TINCTURES?

They are not made from the crude material, but by dissolving the active principles in Alcohol in definite proportions, and invariably represent a uniform amount of therapeutic power.

Send for printed matter on **CON. TINCT. AVENA SATIVA** in the Morphia or Opium Habit, and certificates from different members of the Medical Profession, citing cases under their charge, treated by it; also **REVISED AND ENLARGED MANUAL**; also Price Lists, to

B. KEITH & CO.,
75 WILLIAM STREET, NEW YORK, U.S.A.

JOH. DIEDR. BIEBER,
MANUFACTURING CHEMIST

AND

DRUG GRINDER,
UHLENHORST, near HAMBURG, GERMANY.

SOLE AGENT OF THE
TURKESTAN SANTONINE WORKS.

SANTONINE
In Bulk or in Bottles at Lowest Rates.

SPECIALTIES:

Spirituos Preparations, Ethers, Alcohols,
Liniments, and Tinctures for Bonded
Shipment.

Dutch Medicines for the Cape Colony.

Pure Gingerine, Pure Capsicine, made with
the Purest Spirit in Bond.

Tobacco Extract, Pure Kentucky, for Sheep
Dipping.

Export Orders taken **ONLY** through European
Druggists or Commission Merchants.

GREAT BRITAIN BRANCH!

BEWARE!

In May, 1884, the Court of Appeal, London, England, granted us a perpetual injunction (with costs) against Parrott & Co., of that city, manufacturers of the so-called "St. Davids Oil." This decision for ever prohibits the use of the term "St. Davids Oil," or any similar term, as well as the words, The Great German Remedy, or any title or words similar to those used by us in connection with St. Jacobs Oil. We will promptly prosecute all wrongdoers, and will pay, liberally, for information that will lead to the conviction of anyone infringing our rights. Our trade-marks are registered everywhere and duly protected by law.

THE CHARLES A. VOGELER COMPANY.



CURES

**Rheumatism,
Neuralgia,
Backache,
Swellings,
Sore Throat,
Strains, Sores,
Scalds, Burns,
Toothache, etc.**

ST. JACOBS OIL CONQUERS PAIN

It cures all aches and pains for which an external remedy may be applied. No preparation on earth equals it. Throughout America and Australia it is pronounced by the people and the press a blessing to humanity, and the term "It Conquers Pain" has become a household saying in millions of homes. Sold by Chemists and Druggists in Great Britain at 2s. 6d. Directions in eleven languages. Beware of worthless imitations. Parties unable to obtain St. Jacobs Oil of their dealer will receive it post-paid by sending 2s. 9d. to

The Charles A. Vogeler Co.,
45 FARRINGDON ROAD, LONDON.

Main House: BALTIMORE, MARYLAND, U.S.A.
Branches: SAN FRANCISCO, CALIFORNIA; TORONTO, CANADA; SYDNEY, NEW SOUTH WALES; MELBOURNE, VICTORIA; AND LONDON, ENGLAND.

IMPORTANT.

Chemists and Druggists of Great Britain will, upon application to our London house, receive, free of all expense, novel and effective advertising matter regarding St. Jacobs Oil.

MACTAVISH & LEHMANN

CHEMISTS AND WHOLESALE DRUGGISTS,
MANUFACTURERS OF ALL AERATED WATERS,

IMPORTERS OF PHOTOGRAPHIC CHEMICALS AND APPARATUS, and

COMMISSION MERCHANTS.

LABORATORY, STORES, AND CHIEF OFFICE—No. 1 THE BUND, SHANGHAI.

Branches—Hongkew Medical Hall, Shanghai; Hankow Dispensary, HANKOW; Tientsin Dispensary, TIENTSIN

MACTAVISH & LEHMANN, SHANGHAI.

N.B.—M. & L. have, from their long experience, Special Advantages in introducing any NEW PATENTS to the Chinese, and, in fact, taking charge of any CONSIGNMENTS of really saleable articles.

B. G. LENNON & CO.,

WHOLESALE DRUGGISTS & DRUGGISTS' SUNDRIESMEN,

PORT ELIZABETH, CAPE TOWN, & EAST LONDON,

SOUTH AFRICA;

And 11 EDMUND PLACE, ALDERSGATE STREET, LONDON, E.C.

AGENCIES UNDERTAKEN.

1-lb. Bottles.

ESTAB.
1868.

COCKING'S

ESTAB.
1868.

5-lb. Tins.

JAPAN OIL OF
PEPPERMINT



AND MENTHOL
CRYSTALS.

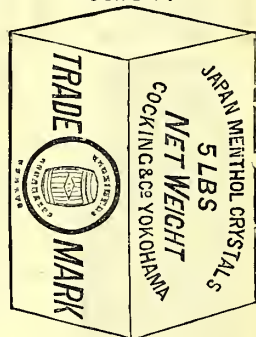
The undersigned are the original and sole distillers of the above well-known goods in Japan. Our brand is a guarantee of absolute purity. Send for circulars. See also testimonials and reports of the trade journals.

The Oil is packed in 1-lb. and ½-lb. bottles. The Menthol is packed in 5-lb. and 1-lb. tins, 1-lb. and ½-lb. ¾-catty and ¼-catty bottles.

SOLE CONSIGNEES FOR EUROPE:

Messrs. SPIES BROS. & CO., 106 Fenchurch Street, London.

COCKING & CO., Wholesale Drug Importers and Sole Distillers of Peppermint, YOKOHAMA, JAPAN.



HOP BITTERS CAUTION.

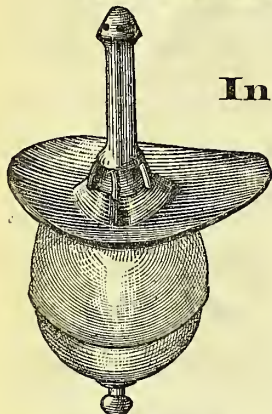
Our Preparation being duly Registered and Trade Marked under the Laws of Great Britain, and having been placed before the Public at great expense to us, we give notice that we shall fully protect our rights in every instance. Anyone making use of our Title, Labels, Bottles, or in any way attempting to trade on our reputation will be dealt with at once to the fullest extent of the law.

HOP BITTERS CO., London.

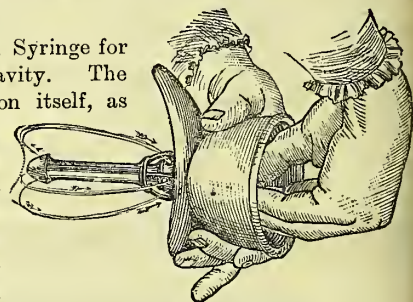
"PALLAS" SYRINGE.

VAGINAL AND RECTAL.

In Black Walnut Case, Satin Lined.



A MOST PERFECT and simply-constructed Syringe for medicating and irrigating the vaginal cavity. The novel bulb of this Syringe, when doubled upon itself, as shown in the cut, will cause no fluid to be left, as is so apt to happen with the ordinary bulbs, and when filled will contain just enough fluid for the expansion of the Vaginal folds. The hard rubber labial shield, with its plug, when firmly pressed against the labia, will both prevent spilling and soiling of linen, and the fluid



can therefore be kept in circulation and in contact with the parts by repeating the pumping motion of the bulb. It will also be noticed that the fluid escapes as a spray from the large holes at the point of the stem and returns through the holes at the root of same, which is provided with hard rubber screen-bars, preventing the folds from interfering with the rapid return of the fluid into the bulb. In filling the bulb, a couple of turns will unscrew it.

CRISTIAN JENSEN & CO., 2,207 FAIRMOUNT AVENUE, PHILADELPHIA.
WALKER, TROKE & CO., 82 City Road, London, Sole British Agents.

CARL L. JENSEN'S CRYSTAL PEPSIN

(SOLE ORIGINATOR OF PEPSIN IN SCALES AND "CRYSTAL" PEPSIN TABLETS)

Has Achieved Unparalleled Fame in the following Treatments:

1. In most varieties of Dyspepsia.
2. In all forms of Debilities.
3. As a Solvent for Muco-Purulent matter.
4. Injected as a Solvent for Coagulated Blood in the Bladder.
5. As a Solvent for Diphtheritic patches and membranes, using a hot solution not above 130° Fahr. as a spray every fifteen minutes.
6. Mixed with Food for Rectal Alimentation.
7. Injected into cavities through an Aspirator Needle for the solution and removal of diseased accumulations.
8. For Predigestion of Milk; to each pint of warm milk use a few grains of the Pepsin previously dissolved in a little lemon-juice; decidedly superior to and more economical than Pancreatine.



Formula for Wine of Pepsin: Jensen's Pepsin, 192 grs.; Sherry Wine, fl. 3 viss.; Glycerine, pure, 3 iss.; Tartaric Acid, 5 grs. Sig.—Fl. 3 after meals. This is three grains of the Pepsin to each teaspoonful.

JENSEN'S BEEF PEPTONE

IN TRANSPARENT GLASSY SCALES.

This Peptone is not a partially-digested product, but representing the Beef completely digested by the Pepsin mentioned above containing all the elements of the beef except fat. One ounce equal to eight ounces tender beef. Retail, 2s. 6d. per ounce.

The above preparations are only manufactured and put up exclusively as specialities by

CARL L. JENSEN, 2,039 GEEEN STREET, PHILADELPHIA, PA.

EXCLUSIVE BRITISH AGENTS—

WALKER, TROKE & CO., Wholesale Druggists, 82 City Road, LONDON.

Sold by **NEWBERY & SONS, 1 King Edward Street, Newgate Street, LONDON**; **GEHE & CO., DRESDEN**; and **CRISTIAN JENSEN, Gasveien No. 2, COPENHAGEN.**

Golden Scale PEPSIN

MANUFACTURED BY THE NEW YORK AND CHICAGO CHEMICAL CO.

This Pepsin is simply the pure unadulterated gastric ferment in the form of transparent golden scales.

Inspection will convince anyone of its purity.

Physiological Trial in the test-tube will demonstrate that its digestive power is unsurpassed.

Clinical Experience will give infallible satisfaction in all cases where use of pepsin is indicated.

Our Golden Scale Pepsin is Freely Soluble. It is instantly dissolved by water.

Absolutely Pure. It is freed from mucus and other organic impurities. It contains no adulterant such as starch, sugar-of-milk, or common salt. These adventitious substances, which are added for various purposes to most commercial pepsins, have done much to bring this most valuable remedy into disrepute. To insure success, always use the GOLDEN SCALE PEPSIN, which cannot be adulterated without changing its appearance.

High Digestive Power. We guarantee our GOLDEN SCALE PEPSIN to equal in digestive power any pepsin ever made, either domestic or foreign.

Low Price. GOLDEN SCALE PEPSIN is the cheapest pepsin now before the public, and can be prescribed in large doses at a moderate cost. Dispensed in one (1) oz. bottles at 4/. Samples furnished free to physicians.

A PURE PEPSIN AT THESE PRICES.

In 1 oz. Bottles, 2/ each, Packed 16-1 oz. Bottles in Wooden Box.

" 4	"	"	8/	"	"	12-4	"	"	"	"
" 8	"	"	16/	"	"	12-8	"	"	"	"
" 16	"	"	32/	"	"	15-16 oz. Cans	"	"	"	"

Discount 15 per cent. in lots of 15 lbs. Assorted to suit Purchaser.

BEYOND QUESTION THE BEST PEPSIN FOR PHARMACEUTICAL PREPARATIONS.

SAME PEPSIN POWDERED (PURE) AT SAME PRICE.

CAUNT & JANVIER, 55 Grand St., New York, U. S. A.

JOHN M. RICHARDS, Sole Agent for Great Britain, 46 Holborn Viaduct, LONDON.

TRUSSES! TRUSSES!!

(I. B. SEELEY'S SPECIALITIES.)

For Twenty Years Exclusive Manufacturer of Hard Rubber Trusses, Supporters, and Pile Pipes.

London—1881—Announcement—The World's Recognition of Merit at the late International Medical and Sanitary Exhibition, London.

The world's most competent judges recognise their superior excellence by granting **THE ONLY AWARD OF MERIT FOR TRUSSES TO I. B. SEELEY**, Philadelphia, Pa., U.S.A., over 68 competitors, thereby confirming their high favour with America's most distinguished Surgeons.

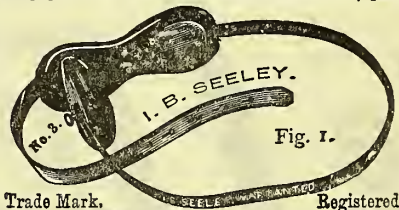
JUDGES:—THOMAS BRYANT, F.R.C.S.; CHRISTOPHER HEATH, F.R.C.S.; THOMAS SMITH, F.R.C.S.; JOHN WOOD, F.R.S., F.R.C.S., Lond.

SEELEY'S HARD RUBBER TRUSSES,

MADE IN EVERY DESIRABLE PATTERN.

Prices reduced below competition, meeting all popular demands. Practical construction, quality of material, high finish, never equalled.

Fine steel springs, neatly covered with highly polished Hard Rubber, with Pads anatomical and practical in construction. Used in bathing. Unaffected by time, use, or climate. Affording comfort, safety, cleanliness, and durability to the wearer, with steady and successful adjustment to the dealer, without the loss and annoyance of soiled or damaged stock—important advantages justly appreciated by the trade, as their unprecedented demands give most positive proof.



Having long established superior quality of material the first consideration, all the different parts in the construction of my specialities will be found of unequalled excellence, while the practical experience for a quarter of a century devoted to the extensive Retail Department of my establishment has afforded special advantages in the proper construction of Trusses to best meet the requirements; hence the efforts to imitate my Patterns, adopt long-recognised Trade-marks and Copyrights with claims of "just as good as Seeley's" so often made.

CAUTION TO COUNTRY DEALERS.—As success finds envious imitators, to better secure your demands against the various imitations which are being offered, ask for "Seeley's Genuine," stamped (spring and strap) "I. B. SEELEY—Warranted."

Supplied by all Leading Wholesale Druggists.

ESTABLISHMENTS:—1347 CHESTNUT STREET, PHILADELPHIA; 74 FLEET STREET, LONDON, E.C.

The correct and successful mechanical treatment of **HERNIA** or **RUPTURE** a **SPECIALITY**, under patronage and endorsement of the World's most distinguished Surgeons and Practitioners.

Reference by Permission—Professors S. D. GROSS, D. HAYES AGNEW W. H. PANCOST, Dr. THOS. G. MORTON, and others.



HORSFORD'S ACID PHOSPHATE,

(LIQUID).

Prepared according to the directions of Prof. E. N. HORSFORD, of Cambridge, Mass., U.S.A.

FORMULA:—Its analysis shows that each fluid drachm contains 5 1-2 grains free Phosphoric Acid (P_2O_5), and nearly 5 grains Phosphate of Lime, Magnesia, Iron, and Potash.

Horsford's Acid Phosphate has been in use by the medical fraternity of the United States and elsewhere for several years, with the most satisfactory results, in

Dyspepsia, Indigestion, Mental and Physical Exhaustion, Insomnia, Nervousness, Diminished Vitality, &c.

It is a colourless liquid, acid to the taste, and contains no pyro-phosphate or meta-phosphate of any base whatever.

Among the numerous forms of phosphorus in combination, Horsford's Acid Phosphate seems best adapted for use as a medicinal remedy.

Especially serviceable as a menstruum for the administration of such alkaloids as strychnia, morphia, quinia, and other organic bases which are usually exhibited in acid combination.

It makes a refreshing and nutritious drink in fevers, and with water and sugar a delicious beverage.

Cable Address—"RUMFORD, PROVIDENCE." RUMFORD CHEMICAL WORKS, Providence, R.I., U.S.A.

FOR SALE BY

CORBYN, STACEY & CO.				300 High Holborn,	} LONDON.
and Branches, ...		7 Foultry, E.C.	86 New Bond Street, W.	153 Leadenhall Street, E.C.	
JOHN BELL & CO. ...	...	225 (late 333) Oxford Street, 2, 4, & 6	...	Hill's Place, Oxford Circus, W.
SAVORY & MOORE ...	...	...	...	143 New Bond Street,
ALLEN & HANBURY ...	...	...	...	Plough Court, Lombard Street.
FRANCIS NEWBURY & SONS ...	...	...	...	1 King Edward Street,
BARCLAY & SONS ...	...	...	...	95 Farringdon Street,
MCDUGALL BROTHERS ...	...	...	...	10 Mark Lane, E.C.
JOHN THOMPSON ...	...	...	...	58 Hanover Street, Liverpool.
HENRY HODDER ...	...	...	...	Bristol.
RAIMES & CO. ...	...	...	...	Edinburgh, Scotland.
THOS. MCMULLAN & CO. ...	...	...	...	Belfast, Ireland.
And by Chemists in London generally, and throughout Great Britain.					

PHYSICIANS who have not used Horsford's Acid Phosphate, and who wish to test it, will be furnished a sample on application to Corbyn, Stacey & Co., Francis Newbery & Sons, Barclay & Sons, London, or John Thompson, Liverpool; and sample will be furnished free of charge, except the expense of packing and postage (seven pence), which amount should accompany the application.



(Expositions * Internationales * Grand * Prize * Medals.)

ALBERT M. TODD,
GROWER, DISTILLER AND RECTIFIER
—OF THE—



"CRYSTAL WHITE" DOUBLE REFINED ESSENTIAL OIL OF TRUE PEPPERMINT.

ORIGINAL AND ONLY MANUFACTURER OF

PIPMENTHOL CRYSTALS.

THE "CRYSTAL WHITE" ESSENTIAL OIL and SOLID CRYSTALS OF PEPPERMINT are produced from SELECT CULTIVATED PLANTS OF THE GENUINE MENTHA PIPERITA, under improved and special processes discovered by the manufacturer, by which they combine EXCEEDING STRENGTH with the most PERFECT FRAGRANCE and ABSOLUTE PURITY. In recognition of their quality they have received the highest commendation from the most EMINENT SCIENTISTS, the LEADING CONSUMERS, and at the GREAT EXHIBITIONS. Prepaid samples and quotations for free delivery in any city in America, Europe or the Colonies, will be sent on application.

GENERAL CABLE ADDRESS, "CRYSTAL, NOTTAWA, MICHIGAN."

*Trade Mark, **CRYSTAL WHITE** Registered*

Nottawa, St. Joseph County, Michigan, U. S. A.



J. F. MACFARLAN & CO.,

EDINBURGH AND LONDON,

Manufacturers of

MORPHIA AND ITS SALTS,
And all Products from Opium.

PURE CHLOROFORM.

Answering all the Tests of the British Pharmacopœia.

ALSO, ANÆSTHETIC ETHER, ALOIN, BEBEERIN, CHRYSOPHANIC ACID, SALICIN.

MAY BE HAD FROM ALL THE WHOLESALE HOUSES, AND AT

17 NORTH BRIDGE, EDINBURGH, and 71 COLEMAN ST., LONDON.

DUNCAN, FLOCKHART & CO.,
WHOLESALE AND EXPORT DRUGGISTS, EDINBURGH.

CHLOROFORM

Prepared from Pure and Methylated Spirit.

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles corked and luted (stoppers attached), and in hermetically sealed flasks when required.

N.B.—We guarantee our Chloroform prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

CHLORIC ETHER.

SP. AMMON. AROMAT.

| SP. ETHER. NITROS.

| SYR. FERRI PHOS. CO. (PARRISH).

Fluid Extracts, Concentrated Infusions, and all Pharmacopœial Preparations.

MANUFACTURERS OF THE CELEBRATED

BLUE BLACK WRITING INK & COPYING INK.

SHIPPERS SUPPLIED ON LIBERAL TERMS.

White Gutta Percha for Stopping Teeth, in 6d. and 1s. Boxes.

The Chemische Fabrik auf Actien, vormals E. Schering, Berlin.

MANUFACTURERS OF

SCHERINGS' PURE CHEMICALS

PARTICULARLY OF

ACID, CARBOLIC or Phenol Absolut.	Fine white hard crystals	Free from Cresylic Acid. Watery solution will not show greasy spots floating on top.
ACID, GALLIC	Almost white needles	Freely and entirely soluble in alcohol or water.
„ PYROGALLIC	Bi-sublimed, white, bulky	Ditto ditto ditto.
„ SALICYLIC (Kolbe's)	White, powder, crystallised, and dialysed	Dissolves colourless in water or alcohol; purest for medicine.
„ TANNIC	Lightest crystals	Dissolves almost colourless in water, alcohol, and ether.
„ „	Powder and granulated	Dissolves freely in water, alcohol, and ether
CELLOIDINE (Patent)	Gelatine plates	Purest Pyroxylin; inexplusive.
CHLORAL HYDRATE	White cake and crystal	See Liebreich's, below.
CHLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age.
CHLOROFORM (ex Liebreich's Chloral)	Schering's original label	Free from foreign chlorides. Will leave no odour on evaporation.
CROTON CHLORAL	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
IODINE	Resublimed, fine scales	Purest.
IODOFORM	Dry yellow scales	Purest, by medical reports.
POTASS BROMIDE	Fine white dry regular crystals ...	Perfectly free from iodide, and the most free from chloride.
„ CAUSTIC	Lump and stick, white	Commercially pure, and pure by alcohol.
„ CYANIDE	Ditto ditto	30%, 45%, 60%, and 95%.
„ PERMANGANATE	Large and small crystals	Chemically pure.
„ IODIDE	Fine white dry regular crystals ...	Apply Barytic and other tests. This will never change colour.
SILVER, NITRATE	Fine large crystals	63 to 63½% pure silver.
SODA, CAUSTIC	Lump and stick, white	Chemically pure, and pure by alcohol.
SODA SALICYLATE, and other Salicylates	White powder and crystals	Freely soluble in water and alcohol.

H. FINZELBERG, of Andernach-on-Rhine,

MANUFACTURER OF

ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
FERRUM OXYD. (5% Dialysed)	Transparent brown liquid, purified by Dialysis	Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.
PEPSIN PORCI (100%)	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

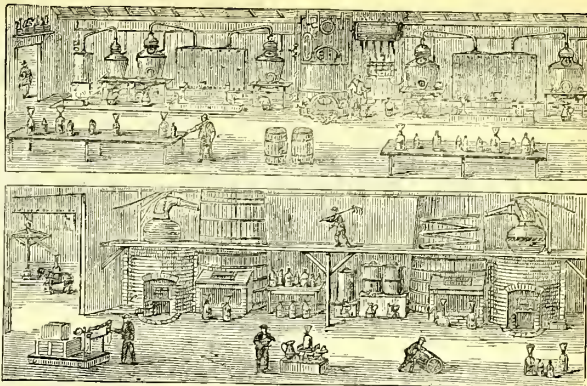
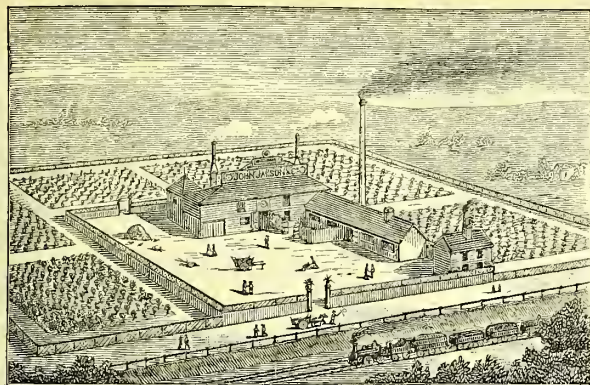
SCHERINGS'
PARALDEHYD—ABSOLUTELY PUREST.

See Report of the Physiological Action.

SOLE WHOLESALE AGENTS—

A. & M. ZIMMERMANN, 27 MINCING LANE, LONDON, E.C.

For Quotations, &c., apply to Wholesale and Export Drug and Chemical Houses.



MITCHAM PEPPERMINT, LAVENDER OILS, ETC.

STEAM DISTILLERIES: MITCHAM ROAD, NEAR WEST CROYDON, SURREY.



JOHN JACKSON & CO.,

17 PHILPOT LANE, FENCHURCH ST., LONDON, E.C.



Each Bottle must bear the above Trade Mark, under which we send from our Mitcham Distilleries only PURE Peppermint, Lavender, and Camomile Oils. Each Bottle is labelled, specifying that our Oils are guaranteed PURE, and as such are INVOICED.

THE soil and climate of the District of Mitcham (Surrey) are most favourable to the good culture of Peppermint, Lavender, and Camomile, and produce those qualities of Essences so much sought after by Chemists, Druggists, &c., throughout the world.

It is beyond dispute that our Peppermint Oil is the best manufactured, and we defy competition, which accounts for the high prices obtained.

We are the largest Growers and Distillers of Peppermint, Lavender, and Camomile in England, and we spare no expense in obtaining the highest state of cultivation. We distil only the pure plants, the greatest care being taken to avoid weeds or heterogeneous substances.

Our Distilleries are built on the newest and most approved principles; the addition of steam power aiding us to produce the best results obtainable. Our Essences are entirely white, and, being free from resin, they will retain their strength for an indefinite period.

We are particularly anxious that our Trade Mark should not be confused with that of numerous so-called Distillers and others, who import inferior and foreign productions, all of whom represent their oils as from Mitcham.

The low price of American Mint Oils is easily accounted for by the great difference in quality. It is well known that extensive factories have been built there for the extraction of Menthol, which operation greatly diminishes the quality of these Essences.

We protest against all such products offering no guarantee to purchasers.

All Oils bearing our Trade Mark are guaranteed pure and genuine, Mitcham Grown and Distilled. By using our Oils, Chemists, Perfumers, Druggists, and others can rely on the regularity of their preparations, a result hitherto impossible to obtain, and at much less cost.

Besides which, the good Flavour and Strength of our Essences (due to the unquestionably favourable and unrivalled nature of the Mitcham soil) obtains for them the preference from all Peppermint Lozenge Makers, who have acquired, by the use of them, such good fame in England and throughout the world.

Peppermint Alcohols, Dentifrices, and other liquors prepared with our Mitcham Peppermint Oil obtain great superiority, easily ascertained by a trial.

We cannot too strongly urge purchasers, in their own interest, to buy, in preference to all others, our native and genuine products, as they offer besides every guarantee of purity, strength, flavour, and economy.

Awaiting your esteemed demands,

We are, your obedient Servants,

J. JACKSON & CO.

Orders must be sent to our London Office:—17 PHILPOT LANE, FENCHURCH STREET, E.C.

Our Essences are put up in Bottles of $\frac{1}{4}$, $\frac{1}{2}$, 1, 2, and 5 lbs.

PRICES.

MITCHAM PEPPERMINT OIL, Non-Rectified..	40/ per lb.
MITCHAM PEPPERMINT OIL, Rectified	44/ "
MITCHAM PEPPERMINT OIL, Double Rectified	47/ "
MITCHAM WHITE PEPPERMINT OIL, Double Rectified Extra	58/ "
MITCHAM LAVENDER and CAMOMILE OILS, Extra Fine (in same quantities as Peppermint) at Market Price.	

Our Essences are packed in Boxes of—

	12, 24, and 50 $\frac{1}{4}$ or $\frac{1}{2}$ lb. Bottles.
	6, 12, 18, and 24 1-lb. "
	6, 12, 18, and 20 2-lb. "
	2, 4, 6, and 12 5-lb. "

And Delivered Free to all parts of the United Kingdom

GEORGE J. CROWTHER & CO., WOODHOUSE **CHEMICAL WORKS, LEEDS.**

SPECIALITY—

IRON LIQUOR, PURE NITRATE OF IRON,

For Silk Dyers, Cotton Dyers, Burl Dyeing, Paper Makers, &c.

CAN BE SENT IN CASKS TO ANY DISTANCE.

FOR PRICES AND PARTICULARS APPLY AS ABOVE.

ACID. ACETIC., B.P., ACID. ACETIC. 1.040. Guaranteed made from Spoa.

PEROXIDE of HYDROGEN, for Bleaching Feathers, Hair, Silk, Jute, Ivory, Bone, &c.

CRETA PRÆCIP. Very White, Soft, and Light.

PHOSPHORIC ACID, B.P. strength and concentrated, Pure and Free from Arsenic.

LIQ. FERRI PERCHLOR. FORT., B.P. Free from Arsenic, and Soluble in Spirit.

HYPOPHOSPHITE of LIME, SODA, &c. CYANIDE of POTASSIUM.

Ferri et Ammon. Cit., Ferri et Quiniæ Cit., B.P., and other Scale Preparations.

DUNN & CO., Stirling Chemical Works, WEST HAM, LONDON.

Sole Wholesale Agents,

BERNSTEIN & VOGT,

SPECIALITIES—

Acids: Benzoic, Gallic
PYROGALLIC, Tannic.
Iodine, Iodoform, Iodides of Alkalies.

DR. HEINRICH BYK, BERLIN.

Bromine, Bromides of Alkalies. Chloralhydrate,
Silver Nitrate, Salts of Gold, Oxalate
of Potash, Pyroxylin.

*Correspondence with the
Colonies invited.*

28 Jewry Street,

LONDON, E.C.

ROBERT GRAESSER,
RUABON.

MANUFACTURER OF

CARBOLIC ACID, PICRIC AND AURINE.

SPECIALITY—

PURE CARBOLIC CRYSTALS,

40 DEGREES CENTIGRADE, IN

DETACHED and ICE CRYSTALS.

MORRIS & CALLARD,

PONTAMMAN CHEMICAL WORKS,

AMMANFORD, R.S.O., CARMARTHENSHIRE,

MANUFACTURERS OF

ACETIC ACID, P.B., ACETIC ACID FORT, SP. GR. 1.040,

ACETATE OF SODA,

NAPHTHA, SULPHURIC ACID, AND CHARCOAL.

PRICES AND SAMPLES ON APPLICATION.

GOLD MEDAL,
INTERNATIONAL INVENTIONS EXHIBITION, LONDON, 1885.

HIGH TEST
BICARBONATE OF SODA,
SODÆ BICARB. PULV.

CRYSTAL CARBONATE

The Best Preventative of Boiler Incrustation, and the **PUREST**
and **CHEAPEST** form of

SODA CRYSTALS.

One Ton of Crystal Carbonate contains as much Alkali as 48 cwts.
of Soda Crystals.

SEPTEMBER, 1885.

Price of ONE TON of

CRYSTAL CARBONATE,

F.O.R. WIDNES,

£5 14s. 0d.

Price of 48 CWTs. of

SODA CRYSTAL,

F.O.R. WIDNES,

£8 8s. 0d.

GASKELL, DEACON & CO.,
WIDNES, ENGLAND.

PERSONAL MANAGEMENT IN LONDON.
PERSONAL REPRESENTATION IN THE COUNTRY.

GEORGE WALKER, late of the Firm of Wyleys & Co.; CHARLES TROKE, of the late Firm of Gabriel & Troke,
TRADING AS

WALKER, TROKE & CO.,

WHOLESALE AND
EXPORT DRUGGISTS,
82 CITY ROAD, LONDON, E.C.,

MAKERS OF

LOTIO ANTISEPTICA.—A Soluble Alcoholic Solution of Coal Tar.
ACID GLYCERINE OF PEPSINE PORCI—equal to any in the Market.
SOLUBLE ESSENCES for Mineral Waters and Flavouring Purposes.
CONCENTRATED WATERS—1 to 40.
GELATINE COATED HORSE, DOG, AND OSTRICH BALLS.
AMMONIA MONOCARB—Very Pungent and Lasting, with a Fine Aroma.
And Pharmaceutical Preparations of every description.

EXPORT ORDERS RECEIVE CAREFUL ATTENTION.

TOWLE'S ANTIBILIOUS PILLS.

1/1½ | Containing the finest and most effective vegetable aperients combined with the pure extract of Camomile, and entirely free from all mercurial preparations. | 2/9

TOWLE'S CHLORODYNE

The Original Preparation, as approved by the Medical Profession on account of its known composition and uniform strength.

Retail at 13½d., 2s. 9d., 4s. 6d., and 11s.

LIQ. CHLORODYNI

As originally introduced by A. P. Towle, and free from stamp duty for dispensing. 4 ozs., 4s.; ½ lb., 5s. 6d.; 1 lb., 10s.
Also in quantities of 6 lbs. and upwards at special quotations.

TOWLE'S CHLORODYNE LOZENGES AND JUJUBES

In 1, 2, and 4 lb. bottles, at 3s. per lb., and 6d. and 1s. boxes. Foiled, lined, and neatly got up for the counter, 4s. 6d. and 9s. per doz. Quantities of 7 lbs. of Lozenges and upwards stamped with chemist's own name free of charge.

A. P. TOWLE & SON, Chlorodyne Manufacturers,
75 BACK PICCADILLY, MANCHESTER.

Show Cards and Bills with name on application with instructions for forwarding.

SCHERING'S IODOFORMUM ABSOLUTUM

PUREST FORM, BY ELECTROLYSIS.

SILKY, SCALY, SOFT CRYSTALS,
WITH ONLY FAINT SMELL.

ALSO

PARALDEHYD PURISS. ABSOLUT.

SOLE WHOLESALE AGENTS—

A. & M. ZIMMERMANN, LONDON.

ESSENTIAL

For centuries this oil has enjoyed a wide-spread reputation in China and Japan as an external remedial agent in Rheumatism, Inflammation of the Joints, and Glandular Swellings.

OIL

Liquid Camphor in its natural and most active form. Imported from China and Japan. Made by distilling the wood of the Camphor Tree (*Laurus Camphora*). Chemically it consists of a saturated solution of Camphor in a terpene, in the proportion of about one in four.

This natural oil must speedily supersede the fatty oils and ointments of Camphor now in use, as it is both more cleanly and efficacious.

Price, 1s. 3d. per lb.;
In Winchester Quarts, 1s. net.
In Ordering specify "UMNEY'S."

CAMPBOR

WRIGHT, LAYMAN & UMNEY,
SOUTHWARK, LONDON.

COCAINE HYDROCHLORATE

As original makers in this country of Cocaine salts, we beg our friends to note that we are prepared to meet any legitimate competition, and to supply a product of the highest purity and activity as heretofore. We have still further reduced our price, and invite enquiries for quotations.

TANNER & CO., Manufacturing Chemists,
TOTTENHAM, LONDON.

HEATHFIELD'S Liquor Opii Sedativus,

By "BATTLE'S PROCESS,"

Guaranteed precisely as made in the laboratory, and under the superintendence of the late Richard Battley.
Can be procured from the principal Patent Medicine Dealers and Wholesale Druggists, or at

12 WILSON STREET, FINSBURY.

ALFRED H. JACKSON & CO.

(SUCCESSORS TO NICOL & HIGGINBOTTOM.)

MAKERS OF

ACETIC ACID

AND

SUGAR OF LEAD

(WHITE AND GREY).

Sandy Lane Chemical Works,
CLAYTON, MANCHESTER.

T. & H. SMITH & CO.,

CHEMICAL MANUFACTURERS,

OFFER

MORPHIÆ HYDROCHLOR.

In powder and crystals.

MORPHIÆ ACETAS

MORPHIÆ TARTRAS

Introduced by them and specially prepared
for hypodermic treatment.

CODEIA

APOMORPHIÆ MUR.

PODOPHYLLIN

JALAPINE

SALICINE

CHLOROFORM PURE

CHLOROFORM METH.

Their brand has been for many years known to
the Wholesale Trade as absolutely pure.

ALOIN

RESINA SCAMMONII, B.P.

GINGERINE

CAPSICINE

CAMPHOR MONOBROM.

ALKALOIDS, &c., &c.

EDINBURGH Address—

21 DUKE STREET.

LONDON Address—

12 WORSHIP STREET, E.C.

SYMES & CO.,



Pharmaceutical Chemists,

LIVERPOOL,

EXPORT DRUG MERCHANTS,

IMPORTERS OF

BRAZILIAN DRUGS.

AMERICAN & CONTINENTAL SPECIALITIES.

MENTHOL.

MANUFACTURERS OF

OL. LAVAND. RECT.

Now largely replacing the Mitcham Oil. 21/- lb.

LAC BISMUTHI

LAC BISMUTHI ET CERIL.

HYDROBROMIC SYRUP OF HYPOPHOSPHITES, &c.

London Depot—Snow Hill Buildings, E.C.

SPECIAL PHARMACEUTICAL PREPARATIONS.

GLYCEROLE OF PEPSINE

A SPECIAL PREPARATION.

Perfectly reliable, and the most valuable fluid form for the administration of *Pepsin Porci*. It is of definite strength and slightly acid; free from odour, and almost tasteless.

7/ per lb., C. Qts. 6/6, W. Qts. 6/.

WILL KEEP GOOD IN ANY CLIMATE

THE TRUE OL. RUSCI.

The new remedy for Eczema and Ringworm. Imported direct from the interior of Russia. See *Pharm. Journ.*, pp. 381, 439.

8/ per lb., C. Qts 7/, W. Qts. 6/.

Also, TINCT. RUSCI, COLLOD. RUSCI, and POMADE RUSCI, "Hebra."

SUCCUS TARAXACI

FROM THE FRESH AUTUMNAL ROOT.

Prepared by a special process in which the flavour is preserved and the bitter principle retained; the product being bright and clear, with all the medicinal qualities of the fresh root unimpaired.

1/10 per lb., C. Qts 1/8, W. Qts. 1/6.

WILL KEEP GOOD IN ANY CLIMATE.

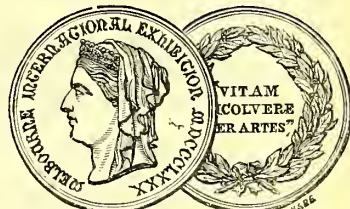
THOMAS GREENISH, Pharmaceutical Chemist,
20 New Street, Dorset Square, N.W., and
5 Bathurst Street, Hyde Park, W.

GOLD MEDALS.



SYDNEY, 1879.

CALCUTTA,
1884.



MELBOURNE, 1880.

THOMAS WHIFFEN, BATTERSEA, LONDON,

Manufacturer of

QUININE,

WHITE AND UNBLEACHED SULPHATES. ALSO BISULPHATE,
MURIATE, BROMIDE, PHOSPHATE, CITRATE, SALICYLATE,
VALERIANATE CRYSTALS, ETC., ETC.

QUINIDINE, CINCHONIDINE, CINCHONINE, ETC.

QUINETUM.

The Alkaloids of India, Cinchona Succirubra Bark, and

QUINETUM SULPHATES.

LIQUID EXTRACT OF YELLOW CINCHONA BARK,

Ext. Cinch. Flav. Liq. P.B. "Whiffen's" Sp. gr. 1,100.

SALICINE.

STRYCHNINE, "HULLE'S."

The Advertiser is the Proprietor and Inventor of this well-known Brand.

BAISS BROTHERS & CO., WHOLESALE AND EXPORT DRUGGISTS,

AND

Manufacturing Chemists and Druggists' Sundriesmen.

ESTABLISHED 1833.]

JEWRY STREET, LONDON, E.C.

[ESTABLISHED 1833.

QUALITY GUARANTEED BY
AFFIXING OUR TRADE MARK
TO EVERY PACKAGE.

TRADE MARK



QUALITY GUARANTEED BY
AFFIXING OUR TRADE MARK
TO EVERY PACKAGE.

FOR EXPORT ONLY.

An exhaustive illustrated Export Prices Current, comprising every requirement of the Chemist and Druggist, will be published on the 1st of January, April, July, and October, and can be had by application (post free) on receipt of trade card. The attention of the trade is especially called to their preparations, including Extracts, Concentrated Decoctions, and Infusions, for which their name is so well established, and are guaranteed to be prepared with the utmost care from the finest drugs, and which will keep in hot climates for any reasonable length of time.

Manufacturers of Fruit Essences, which form a ready means when mixed with Acidulated Simple Syrup, of producing an article that has all the flavour of the freshly pressed fruit, and can thus be used with aerated water as a most refreshing drink in all hot climates.

CORRESPONDENCE IN ALL LANGUAGES.

Ethers, Alcohols, Liniments, and Tinctures shipped in bond at lowest market prices.

Patent Medicines and Proprietary Articles at special net prices. Scientific and Philosophical Instruments. Surgical Instruments.

Orders sent through Merchants should specially bear the name of BAISS BROTHERS & Co., and will be put on very best terms.

London International and Universal Exhibition, 1884, Gold Medal Awarded for our Pharmaceutical Preparations
Calcutta Exhibition, First-class Certificate and Two Prize Medals Awarded for our Pharmaceutical Preparations.

HEWLETT'S LIQUOR SANTAL FLAV. c. BUCHU et CUBEBA

THE ORIGINAL PREPARATION.

Price (in England) 10s. 6d. per pound, packed (for Dispensing only) in 10-oz., 22-oz., 40-oz., and 90-oz. Bottles.

HEWLETT'S "PERMANENT" LIQUOR FERRI IODIDI.

LIQUOR EASTONI (HEWLETT'S).

SYRUP EASTONI (HEWLETT'S).

C. J. HEWLETT & SON, Manufacturing and Pharmaceutical Chemists, LONDON, E.C.
40, 41, & 42 CHARLOTTE ST.,
ESTABLISHED 1832.

Physicians will oblige, when ordering Liq. Santal Flav. cum Buchu et Cubeba, by writing "Liquor Santal Flav. c. Buchu et Cubeba (Hewlett's)."

ESTABLISHED OVER 140 YEARS.



PRIZE MEDAL, PARIS, 1878.

THREE PRIZE MEDALS
CALCUTTA, 1884.

PRIZE MEDAL, PARIS, 1867.

BURCOYNE, BURBIDGES, CYRIAX & FARRIES,



WHOLESALE
DRUGGISTS, and
MANUFACTURING PHARMACEUTICAL CHEMISTS,
16 COLEMAN ST., LONDON, E.C.

SPECIALITIES— PEPTOLEINE

(REGISTERED)

A VALUABLE REMEDY IN CONSUMPTION AND OTHER WASTING DISEASES.

This elegant preparation is an Emulsion containing 50 per cent. of the finest Cod-Liver Oil, combined with nutritious tonics on an entirely new principle. It is rendered palatable by the addition of Aromatics, and is, we venture to assert, the most perfect Emulsion of Cod-Liver Oil hitherto brought before the notice of the Medical Profession and the Public. We guarantee it to *keep well in any climate.*

FLUID EXTRACTS

These preparations are manufactured from the best selected Drugs, and are recommended for their uniformity and reliability. They are so prepared that one fluid ounce of the finished Extract represents an equivalent weight of the pure drug.

SOLE CONSIGNEES OF

Salicylic Acid and all Salicylic Salts (Kolbe's Patent).
Vanilline Crystals and Vanilla Sugar (De Laire's
Patent). Coumarine, Heliotropine, &c.
Antipyrin and Kairin, the new Febrifuges.

Kahlbaum's Pure Alcoholic Compounds, for original
research. &c.
Chanteaud's Dosimetric Medicines (Dr. Burggraeve's
system).—Price List upon application.

Parke, Davis & Co.'s Fluid and Solid Extracts, Concentrations, and other Pharmaceutical Preparations.

WHOLESALE DEPOT OF

Chanteaud's Seidlitz, Retail 2/6; per doz. 24/, less 25 % | Malto Pepsyn (Hazen Morse's), Retail 2/9; per doz. 24/6.

Prize Medals were Awarded to us at the Great International Exhibitions 1851, and 1862, for the General Excellence of our Goods. ESTABLISHED UPWARDS OF A CENTURY.

BUTLER, McCULLOCH & CO.,

COVENT GARDEN MARKET, LONDON.

WHOLESALE IMPORTERS AND EXPORTERS OF ALL KINDS OF

MEDICINAL AND CULINARY HERBS, ROOTS, BARKS, SEEDS, AND PREPARATIONS. DISTILLERS OF PERFUMED & MEDICINAL WATERS. IMPORTERS OF LEECHES.

All Powdered and Crushed Articles are prepared in London. Absolute Purity is thus assured.

THE GREATEST CARE AND JUDGMENT USED IN THE SELECTION AND PACKING OF INDENTS.

SPECIALITIES.—MEDICINAL HERBS PACKED IN PATENT CARDBOARD BOXES,

Which can be opened for examination of contents and closed up again without detriment to the package.

PRICE LISTS, SAMPLES, AND SPECIAL QUOTATIONS ON APPLICATION.

PRIZE MEDAL, INTERNATIONAL HEALTH EXHIBITION, 1884, for purity and excellence of our prepared Herbs and Powders.

POTTER & CLARKE,

75 Weston Street, S.E., and Viaduct House, Farringdon Street, E.C., LONDON,

WHOLESALE AND EXPORT BOTANIC DRUGGISTS,

Importers of American and Continental Drugs, Herbs, and Essential Oils,

LEECH IMPORTERS. MANUFACTURERS OF FLUID EXTRACTS AND CONCENTRATED MEDICINES.

SPECIALITIES :

Herbs in bulk & packets, Composition Essence, Stramonium Cigarettes, Compound Asthma Cigarettes, &c.

Price Lists, Samples, and Special Quotations on application. Foreign Indents receive our special attention.

SULPHUR TABLETS.

TITLE AND TRADE-MARK REGISTERED.

WITH a view of still further popularising Sulphur Tablets we invite the co-operation of Chemists throughout the United Kingdom.

SULPHUR TABLETS are sold at One Penny each, also in family packets at 1/-. leaving the retailer a clear profit of 50 per cent.

SULPHUR TABLETS will keep any length of time without spoiling.

SULPHUR TABLETS will sell readily and recommend themselves when once introduced.

SULPHUR TABLETS should be kept in every household, as a handy and simple Medicine, which Children will take readily.

SULPHUR TABLETS are composed of Sulphur, Cream of Tartar, and other harmless ingredients of repute for their purifying qualities.

SULPHUR TABLETS are put up in handsome decorated tin boxes, each containing one Gross, and are sent out carriage paid at the following prices, with Counter Bills and Window Slips.

1 Gross 8/- per Gross, net cash with order.	10 Gross 7/3 per Gross, net cash with order.
5 " 7/6 " " " "	50 " 6/9 " " "

100 Gross 6/3 per Gross, net cash with order.

SPECIAL TERMS FOR WHOLESALE AND EXPORT ORDERS. SOLE AGENTS ON SPECIAL TERMS.

MANUFACTURED BY

FRAZER & CO., LIM., 62 Dale Street, LIVERPOOL,

TO WHOM CHEQUES AND ORDERS MUST BE MADE PAYABLE.

Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

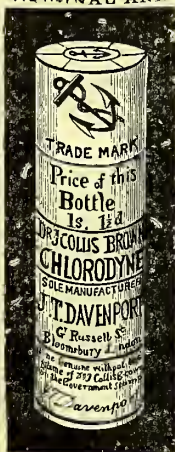
The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—



ONLY GENUINE.

Apothecaries' Hall, London	Frazer & Green, Glasgow	Morson, T., & Son, London
Allen, Hanbury & Co., "	Gale & Co., London	Newbery & Sons, London
Baiss Brothers, "	Giles & Son, Clifton	Oldham, G., & Co., Dublin
Banks & Richards, Birmingham	Goulding, Messrs. Cork	Parsons & Richardson, Leicester
Barron, Harvey & Co., London	Gratton & Co., Belfast	Peake, Allen & Co., Duhir
Bell, John, & Co., "	Grimwade, Ridley, London	Raines & Co., Liverpool
Bourne & Taylor, "	Grindley & Son, Chester	Raines & Co., York
Corbyn & Co., "	Hearon, Squire & Francis, London	Raines, Blanshards & Co., Edinburgh
Cox & Gould, "	Hodgkinson, Tonge & Stead, "	Sang & Barker, London
Curling & Co., "	Hopkins & Williams, "	Sanger, J., & Sons, London
Curtis & Co., "	Hovenden, R., & Sons, Exeter	Sim, James, & Co., Atherdeen
Davy, M'Murdo & Co., Belfast	Hunt & Co., "	Smeaton, W., Leeds
Dohlin, W., & Co., "	Hunt, A., & Co., "	Southall & Co., Birmingham
Drew, Barron & Co., London	Johnson, J. H. & S., Liverpool	Sutton, W., & Co., London
Drew, B., & Alexander, "	Langton, W., & Co., London	Tomlinson, Hayward & Co., Lincoln
Dunn & Company, "	Lynch & Co., "	Treacher, Hodgkinson & Co., "
Edwards, W., Exeter	Mander, Weaver, Wolverhampton	Westrup, J. B., Kensington
Evans, Gadd & Co., London	Marsden & Sons, London	Westwood & Hopkins, Lincoln
Evans, Lescher & Wehh, London	Maw & Son, "	Woolley, James, Manchester
Ferris & Co., Bristol	Meggison & Co., "	Wyleys & Brown, Coventry
Foulger, S., & Son, London	Mackay, John, & Co., Edinburgh	Yates & Co., London

After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

Sold in Bottles—1s. 1 1/2d., 2s. 9d., 4s. 6d., and 11s. Usual Discount to the Profession.

SOLE MANUFACTURER,

J. T. DAVENPORT, Pharmaceutist,
83 GREAT RUSSELL STREET, BLOOMSBURY SQUARE, LONDON.

GOLD MEDALS—DUBLIN, 1882; BOSTON, 1883;
LONDON, (INTERNATIONAL EXHIBITION) 1884.

SIR JAMES MURRAY'S PURE FLUID MAGNESIA.

The ORIGINAL Article, as prepared by the Inventor, Sir James Murray, M.D.

For over 60 years in use as an excellent remedy in cases of
ACIDITY, INDIGESTION, HEARTBURN, GRAVEL, AND GOUT.

Sold by all respectable Chemists, in **LARGE-SIZED** Bottles (the 1s. size containing nearly
Double the quantity usually sold at that price), at **1/**, **2/6**, and **3/6** each.

CAUTION.—Observe that the Signature of the Inventor is on every label.

SIR JAMES MURRAY'S FLUID CAMPHOR

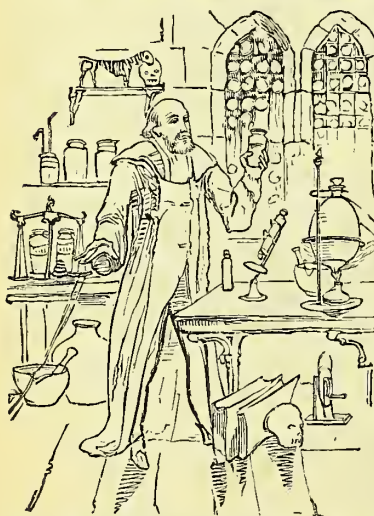
Is a valuable remedy in cases of **SLEEPLESSNESS** and **WEAK NERVES**. Bottles, **1/** and **2/** each.

SIR JAMES MURRAY & SON, Chemical Works, Temple Street, Dublin.
BARCLAY & SONS, 95 Farringdon Street, London.

**THE GREATEST KNOWN CURE
FOR INDIGESTION AND LIVER COMPLAINTS.**

HOWELL'S GOLDEN HERB PILLS

One Box Warranted to Cure almost the Worst Ailment.



**IMPORTANT to
CHEMISTS &
DRUGGISTS.**—
Once you get your
customers to give this
Wonderful Medicine a
trial your sale will in-
crease, and their fame
will soon become
widely known.

In **BOXES**, 1s. 1½d.
and 2s. 9d.

AGENTS WANTED

*Bills, with Testimonials,
and the Names of
Chemists and Druggists
Printed on, sent on
receipt of Label.*

25 MARKET STREET, MANCHESTER.

"MALMERFINE."

JAMES & CO., 16 Moorfields, LIVERPOOL,

Call the attention of the Trade to their preparation "**MALMERFINE**." It is an undoubted cure for Sea Sickness, giving instant relief in all cases. A Surgeon of Mail Steamers (Walter Dunn, B.A., M.R.C.S., Eng.; L.S.A. Lond., &c.) writes that "It relieves all cases and cures most."

Being an artificial Gastric Juice, combined with Stomachic Stimulants, it is also curative in Indigestion and all stomach complaints. Price, 2s. 9d. per bottle. Trade price, 23s. per dozen, from Newbery's, Burgoyne's, Goodall, Backhouse & Co., and most Wholesale Houses. The Proprietors will give special terms to first-class Chemists in seaports who will undertake to push it.

THE "MALMERFINE" MAGNETIC BELT.

Price One Sovereign, will in nearly all cases prevent sea sickness. Chemists obtaining customers for it are allowed a very handsome commission for their recommendation, and may rely on the Belt giving satisfaction, as it combines all the external means which have been found successful in preventing sea sickness, viz., warmth, magnetism, mechanical pressure on the muscles affected, and absorption of medicinal agents through the pores of the skin.

Send for particulars.

INJECTION DAY.

An Infallible Remedy and Certain Cure

IN ALL

URINARY DISCHARGES.

BOTTLES 2/6 EACH.

Depot: J. MUNDAY, Chemist, Cardiff.

London: F. NEWBERY & SONS, 1 King Edward St., E.C.

COLONIAL AGENTS WANTED.

GOLD MEDAL, International Health Exhibition, London.

BENGER'S PREPARATIONS

OF THE

Natural Digestive Principles

AND

SPECIAL FOODS FOR CHILDREN & INVALIDS



THE LANCET, March 25, 1882:—"Mr. Bengel's admirable preparations."

THE MEDICAL PRESS, June 13, 1883, says:—"Few modern improvements in Pharmacy have done so much as Bengel's Preparations to assist the physician in his treatment of the sick."

THE PRACTITIONER, February, 1883, says:—"Deserving of the highest praise, and only require to be made known to the profession to insure their extensive employment."

THE MEDICAL TIMES & GAZETTE, September 8, 1883, says:—"Bengel's Preparations have deservedly a very high reputation, and are all largely used."

THEY CONSIST OF—

1. Liquor Pancreaticus (Bengel),

Containing all the digestive principles of the fresh pancreas. Used to prepare peptonised or partially digested food (no apparatus beyond a jug and a saucepan required), and also medicinally as a digestive.

In 4, 8, and 16 ounce Bottles, to retail at 2s. 6d., 4s. 6d., and 8s. 6d.

2. Liquor Pepticus (Bengel),

An exceedingly active Fluid Pepsine. Dose—One or two teaspoonfuls with meals.

"The Liquor Pepticus prepared by Mr. Bengel is a digestive agent of extraordinary power."—Dr. WM. ROBERTS, F.R.S., at Northwich Meeting of British Medical Association.

In 4, 8, and 16 ounce Bottles, to retail at 3s., 5s. 6d., and 10s. 6d.

3. Bengel's Peptonised Beef Jelly,

A DELICIOUS QUICK RESTORATIVE—WILL KEEP IN ANY CLIMATE.

Concentrated partially digested and solidified beef tea, of delicate flavour. Unlike the various Extracts and Essences of Meat, it contains much of the fibrin or flesh-forming element of the beef in solution. Tins, 2s.

4. Bengel's Self-Digestive Food

For Infants, Children, and Invalids. Containing the natural digestive principles of the pancreas; when mixed with warm milk a process equivalent to partial digestion takes place, by which both the food and milk are adapted for rapid absorption. In no other food has this result been obtained. It can therefore be taken with comfort when all others disagree.

Tins, 1s. 6d., 2s. 6d., and 5s.

DESCRIPTIVE CIRCULARS AND SHOW CARDS ON APPLICATION.

Bengel's Preparations may be obtained through BARCLAY, EDWARDS, SANGER, SUTTON, NEWBURY, and all the leading Wholesale Houses, or of the Manufacturers—

MOTTERSHEAD & CO. (S. PAINE & F. B. BENGER),

PHARMACEUTICAL CHEMISTS,

MANCHESTER.

DR. LALOR'S PHOSPHODYNE

The ONLY MEDICINE of the KIND AWARDED A CERTIFICATE of MERIT at the
CALCUTTA INTERNATIONAL EXHIBITION, 1883-4,
AND THE ONLY TRADE MARK—PHOSPHODYNE—REGISTERED UNDER THE TRADE MARKS ACT.

DR. LALOR'S PHOSPHODYNE

Will keep in any Climate, and is therefore specially adapted for SHIPPING, and wherever introduced COMMANDS A LARGE SALE.

Dr. LALOR'S PHOSPHODYNE, from its immediate effects in cases of Exhaustion, Lassitude, Stomach and Liver Complaints, Urinary and Kidney Difficulties, Want of Stamina, Nervous Debility, and Malarial Diseases, HAS ATTAINED A VERY LARGE

SALE in Africa, China, East and West Indies, the Colonies, Turkey, Asia, and other Hot Climates.

DR. LALOR'S PHOSPHODYNE has become a Household Necessity in every nation and country in the World. Unequalled as a Brain and Nerve Food. Highly recommended by the *élite* of the Medical Profession for Dyspepsia, Mental and Physical Exhaustion, Nervousness,

Wakefulness, Diminished Vitality, &c.

DR. LALOR'S PHOSPHODYNE makes an agreeable Beverage with Water Only, INVIGORATING and VITALISING the BLOOD with the PHOSPHORIC or active Principle of Life.

Sold in Bottles, at 4s. 6d. and 11s., by all Wholesale and Retail Medicine Vendors throughout the World. Manufactured only at

Dr. Lalor's Phosphodyne Laboratory, Hampstead, London, N.W.

A supply of suitable Printed Matter in any Language for distribution, also attractive Show Cards, will be sent for Enclosure to any London House on receipt of a Letter of Advice from Agents.

FINE HEALTHY CHILDREN!

GELDART'S GALACTAGOGUE

Or MILK PRODUCER,

IN BOTTLES, 2s. 9d., 4s. 6d. and 11s.

THIS preparation is the greatest boon ever invented for Mothers and Wet Nurses. Its use produces a copious flow of rich nourishing milk, which thoroughly satisfies the infant, prevents rickets, promotes easy digestion, and lays the foundation of a strong, healthy constitution. It also prevents debility in the mother whilst suckling, and is a capital remedy for acidity, flatulence, indigestion, &c. If taken during pregnancy it promotes perfect gestation, and effectively prevents decay of the teeth, so common to mothers during this period.

Commands a Ready Sale wherever introduced. Will keep good in any climate.

Chemists supplied with Handbills through any of the Wholesale Houses.

PREPARED BY

J. GELDART, Pharmacist, LIVERPOOL.

Proprietor of the Celebrated PARISIAN STARCH GLAZE, and Sole Consignee for the United Kingdom of the world-renowned BRAND'S AMERICAN BITTERS.

DRUGS, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS.

BARRON, SQUIRE & CO.

(LATE DREW. BARRON, & CO.),

WHOLESALE & EXPORT DRUGGISTS,
BUSH LANE, LONDON, E.C.,

MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS,
Beg to inform Merchants, Shippers, &c., that all Indents entrusted to them will receive careful attention and prompt execution.

Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to their having PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

C. R. HARKER, STAGG & MOSS



WHOLESALE CHEMISTS & DRUGGISTS

DISTILLERS AND IMPORTERS OF ESSENTIAL OILS

MANUFACTURING PHARMACEUTICAL CHEMISTS

BRITISH PHARMACOPŒIA, 1885

Preparations according to the New Formulas can be supplied

LIST OF REVISED AND REDUCED PRICES OF

WHEATLY'S LIQUORS & LIQUID EXTRACTS

WILL BE SENT ON APPLICATION

5 LAURENCE POUNTNEY LANE, LONDON, E.C.

BASTIN & CO.,

WHOLESALE AND EXPORT

DRUGGISTS.

SPECIALITIES:—

American Drugs, Roots, Barks & Herbs, Fluid Extracts, &c.

HERBS IN PRESSED PACKETS

(VERY ATTRACTIVE).

Assorted gross on receipt of P.O.O., 8s.
Catalogue of Vegetable Materia Medica sent on receipt of postage stamp.

5 Jackson's Row, MANCHESTER.

DINNEFORD'S FLUID MAGNESIA.



PERFECT IN PURITY AND UNIFORM IN STRENGTH.

Sold by all Wholesale Druggists, and by the Manufacturers,

DINNEFORD & CO.,

Pharmaceutical Chemists,

180 NEW BOND STREET, LONDON.

J. ROBBINS & CO.

METHYLENE.

Discovered to be a general Anæsthetic by
Dr. RICHARDSON in 1857.
1-lb. Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.
COMPOUND ANÆSTHETIC ETHER.
For producing Local Anæsthesia.
In 4-oz., 10-oz., and 20-oz. Stoppered Bottles, 2s., 4s., and 7s.
OZONIC ETHER.
4-oz. and 16-oz. Stoppered Bottles, 3s. 6d. and 12s.
PEROXIDE OF HYDROGEN.
First introduced as a Medicine by Dr. RICHARDSON.
ETHYLATE of SODIUM
(Dr. RICHARDSON'S Formula), for removing Nævi, &c. In 1-oz.
and 1-oz. Bottles, with elongated Stoppers for applying the
Caustic, 2s. 6d. and 4s.
STYPTIC COLLOID.
For promoting the Healing of Wounds by the first intention.
In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d.
and 4s. 6d.; 16-oz., 12s.
CHARCOAL CAPSULES,
Containing pure Vegetable Ivory
Charcoal. In Boxes,
2s. 6d. each.

OXFORD ST. 147

DENOVAL'S MEDICINAL CAPSULES

ARE THE BEST AND CHEAPEST.

Attention is called to the following articles:—

MEDICINAL CAPSULES.

	Trade Price.	Retail.
Peruvian Mixture Capsules.....	10/ & 7/6	3/ & 2/
Matteo Oil and Copaiba do.	11/	2/6
Santal Oil do. (36 in each box) ..	23/	4/
Cubeb Oil and Copaiba do.	9/6	2/6
Copaiba, Cubeb Oil, and Santal Oil do.	15/6	3/6
Copaiba Capsules, No. 0	5/9	1/6
" " No. 1	5/6	1/3
" " No. 2	5/	1/
Copaiba, Alum and Cubeb do.	5/9	1/6
Compound Ferruginous.....	5/9	1/6
Cubeb Oil	23/	4/
Male Fern Oil	10/6	3/
Cod Liver Oil	5/9	1/6
Castor Oil	5/6	1/3
Denoval's Injection (to insure a rapid cure in two days).....	16/	2/9

ALL DRUGS WARRANTED TO BE GENUINE

JULES DENOVAL,

Carlton House, 4 New Cross Road, London, S.E.

EVANS, LESCHER & WEBB,

60 BARTHOLOMEW CLOSE, LONDON;

EVANS, SONS & MASON, (LIMITED),
Montreal and Toronto, Canada.

PARIS AGENCY,
20 Rue J. J. Rousseau.



AUSTRALASIAN AGENCY:
W. J. WATKINS,
Wynyard Lane,
Sydney,
N.S.W.

EVANS, SONS & CO.,

56 HANOVER STREET, LIVERPOOL;

(Manchester Office: EXCHANGE BUILDINGS. Birmingham Office: BARWICK ST.)

WHOLESALE & EXPORT DRUGGISTS

AND

Manufacturing Pharmaceutical Chemists.

Manufacturers of Druggists' Sundries, and Dealers in Patent Medicines and every requirement for Chemists and Druggists.

SOLE PROPRIETORS OF

"SAVARS" SPECIALTIES.

Prices Current of Drugs and Chemicals, and Druggists' Sundries (Illustrated), supplied on application enclosing Business Card.

ILLUSTRATED EXPORT LISTS

(About 200 pages each), containing Prices of Drugs, Chemicals, Pharmaceutical Preparations, Druggists' Sundries, Surgical Instruments, and Patent Medicines, &c., are sent post free to any part of the World on application (ENGLISH, in January and July; SPANISH, in April and October).

THE ABOVE LISTS OFFER UNUSUAL ADVANTAGES AS A MEDIUM FOR ADVERTISEMENTS.

Makers of Proprietary Medicines, Perfumers, &c., by advertising in same, will have their specialties brought prominently under the notice of dealers in all parts of the World. Terms for advertising (which are strictly moderate) may be obtained by applying to MESSRS. EVANS, SONS & CO., 56 Hanover Street, Liverpool.

ALL ADVERTISEMENTS TRANSLATED INTO SPANISH FREE OF CHARGE.

WYLEYS & CO.,

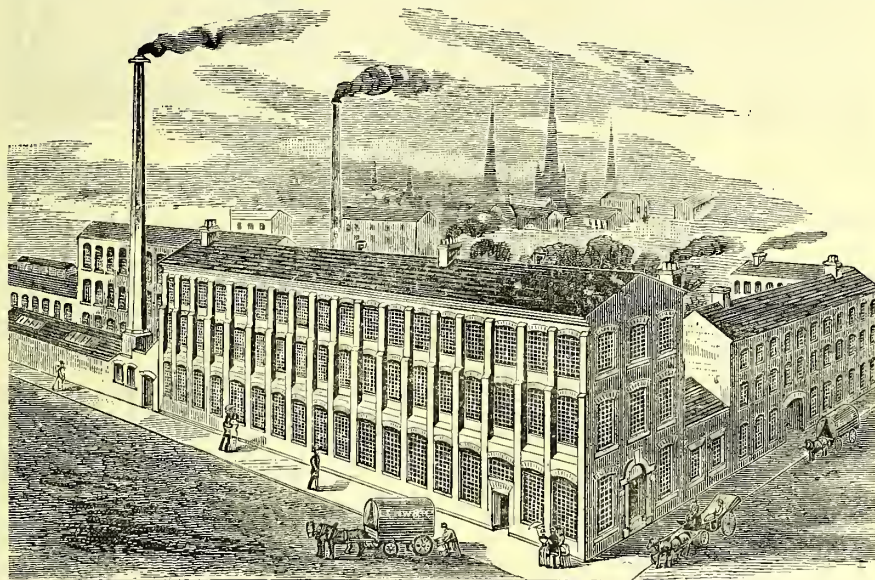
(Partners:—F. WYLEY, M.R.C.S., ENGLAND, L.S.A.—W. F. WYLEY, F.C.S.)

COVENTRY,

And 223 UPPER THAMES STREET, LONDON, E.C.

ESTABLISHED 1790.

WHOLESALE & EXPORT DRUGGISTS & DRUG GRINDERS.



VIEW OF NEW PREMISES, 1884.

MANUFACTURERS OF CHEMICALS & PHARMACEUTICAL PREPARATIONS.

*** GELATINE COATED OVAL PILLS.**

The only oval gelatine coated pills of English manufacture in the market.

*** PEARL COATED PILLS.** Special and extensive list on application.

* For Prices and other particulars, see *Special Advertisement*, page 129.

FLUID EXTRACTS.

SUBLIMATED SERUM GAUZE.

EXTRACT HENBANE (English)
&c., &c.

**ESSENCES FOR AERATED
WATERS.**

CONCENTRATED WATERS.

CHINOQUININE.

CHEKAN.

We were the first importers of this drug. Our liquid Extract is the original preparation.

OLEATES.

MEDICATED ABSORBENT

WOOL (Various kinds).

EXPRESSED JUICES (English).

POWDERED DRUGS.

Special attention paid to powders of guaranteed purity, which may now be had in sealed 1-lb. tins.

SCALE PREPARATIONS.

**HYPODERMIC ERGOTIN
TUBES.**

By their use a fresh solution of Ergotin can be at any time obtained.

FRICTION CAKES (Various).

We were the first to introduce these liniments in the solid form.

EXPORT DEPARTMENT.

We are prepared to execute orders for Export, giving every attention to packing and the requirements of the Market for which orders are intended. Having *direct representatives* in Rio Janeiro and Valparaiso, we are in specially good position with reference to these markets.

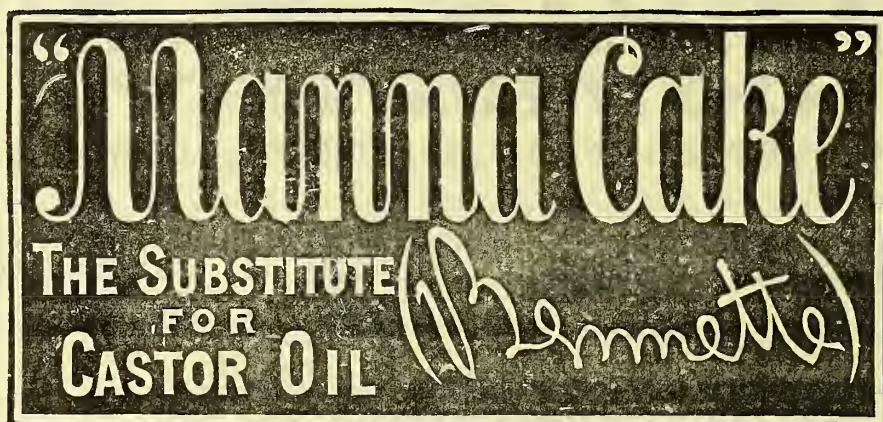
SPANISH PRICE LISTS PUBLISHED QUARTERLY.

We shall be happy to forward English and Spanish Price Lists, Book of Order Forms, and Pill List, to any Chemist in the World on receipt of Business Card.

TO BRITISH, COLONIAL, AND FOREIGN CHEMISTS.

RECOMMENDED BY THE FACULTY.

Price—
12/-
per
Gross.



Retail,
1½d. each;
packet
of
1 dozen,
1s. 3d.

Registered Trade Mark, No. 22,133.

The mildest and most agreeable aperient known. A first-class Family Medicine for every household. Highly approved of by adults; children take it readily and do not suspect its properties. A most suitable aperient for women at all times, and during the whole course of pregnancy. Does not gripe, and leaves no bad effect as Castor Oil does. A digestive tablet and sweet to the taste.

INVALUABLE FOR HOT CLIMATES.

Dr. McCANN, Orchard-Hey, Liverpool, sent the following letter:—December 22, 1883.—“The aperient action of the ‘MANNA CAKE’ is decidedly good. Mildly energetic, free from griping, and to be depended on when a mild but certain aperient is needed. It is also an effectual WORM CAKE. Being pleasant to the taste (it is mainly sugar), its easy administration very strongly recommends its use, especially in fever cases, where all excitement should be avoided.”

TO COLONIAL AND FOREIGN HOUSES.

Terms, 12s. per gross, less discount for cash against shipping documents. A liberal supply of printed matter is included in this, the consignee issuing such as he thinks best. On orders of 20 gross and upwards at a time printed matter is supplied in any language. On orders over 100 gross arrangements will be made for advertising in any country should advertisements not be running.

EXTRACTS FROM LETTERS.

“Please forward me another 4 gross. Its pleasant taste and easy operation constitute it a favourite medicine in my own, as in other families.”

A. T. BORTHWICK, Chemist, Selkirk.

“A Physician in the West of England says he gave Calomel and Jalap in repeated doses without effect, but a MANNA CAKE acted almost immediately.”

“The article is selling freely.”

W. H. HAYWARD, Chemist, Trowbridge, Wilts.

“Send another 4 gross. My counter sale last week was over 10 dozen.” [Fourth order.]

JOHN LEA, Chemist, Folkestone.

“Manna Cake is having an increased sale here, and gives great satisfaction. Many shudder at the idea of taking castor oil, even if it be deprived of taste. Children like them, and I have found in some instances one quite sufficient for an adult.”

A. STOOKS, Chemist, &c., Sittingbourne.

“It answers the purpose admirably, and gives great satisfaction. It (or you) may justly be called ‘The Children’s Friend.’”

H. T. DOBLE, Chemist, Tavistock.

“It is one of our best preparations.”

HENRY BECK, Chemist, Albrighton, Salop.

“The Manna Cake is selling well, and gives great satisfaction. It is an excellent preparation.”

S. STEPHENS, Chemist, Huddersfield.

[Mr. Stephens has contracted for 150 gross.]

“It is singularly mild and efficacious. I certainly consider it a splendid substitute for Castor Oil.”

A. CHRISTIE, Chemist, Newton-Abbot, Devon.

“We find that the Manna Cake sells well, and, so far as we can ascertain, gives great satisfaction. It is taking a good place among the established aperient medicines, and is much liked by children, as well as by adults.”

DAVIDSON & LESLIE, Chemists, Belfast.

“It is with great pleasure I certify to the efficiency of your Manna Cake. It is tempting in appearance and pleasant to taste, and has given every satisfaction; its merits are indisputable; it has wrought wonders in this neighbourhood.”

JOHN SKINNER, Chemist, 558 and 846 Govan Road Govan

WHOLESALE AGENTS.

LONDON—Barclay & Sons; Burgoyne & Co.; Butler & Crispe; Edwards & Sons; Hovenden & Sons; May, Roberts & Co. Maw, Son & Thompson; Newbery & Sons; Sanger & Sons; Sutton & Co.; Thompson, Millard & Co., &c.

PROVINCIAL—W. R. Hedges, Birmingham; Henry Hodder, Bristol; Evans, Gadd & Co. (Limited), Exeter; Battle, Son & Maltby, Lincoln; Brown Brothers & Co., Glasgow; J. H. Blunt & Son, Northampton; Raimes & Co., Edinburgh; W. & R. Hatrick & Co., Glasgow; Glasgow Apothecaries’ Co., Glasgow; Ismay & Son, Newcastle-on-Tyne; Evans, Son & Co., Liverpool; John Thompson, Liverpool; Woolley, Sons & Co., Manchester; Goodall, Backhouse & Co., Leeds; Mason & Proctor, Leeds; W. Foggitt, Thirsk; Rainor & Co., York; Smith & Son, Norwich, &c.

COLONIAL—Faulding & Co., Adelaide; Felton, Grimwade & Co., Melbourne; Elliott Brothers, Sydney; Elliott Brothers, Brisbane; The New Zealand Drug Company, Auckland, Christchurch, and Wellington, New Zealand; Smith, Stanistreet & Co., Calcutta; B. G. Lennon & Co., Cape Colony.

WHO ARE PREPARED TO EXECUTE ORDERS TO ANY AMOUNT.

MANNA CAKE is sent out in Handsome Decorated Tin Boxes, suitable for display on the Counter.

SHOW TABLETS SUPPLIED FREE ON APPLICATION.

Manufactured by BENNETTE & Co., 8 & 10 Station Street, LEICESTER.

LONDON WAREHOUSE—11 LONG LANE, E.C.

Please ALWAYS address BENNETTE & CO.

JAMES WOOLLEY, SONS & CO.,

DRUG MILLERS AND MANUFACTURING PHARMACEUTICAL CHEMISTS.

The "Extra Pale" Cod Liver Oil.
Unchanged at 32° F.

Pure White Beeswax, in bars
Free from rancidity. M.P. 150° F.

Pure Yellow Beeswax, in bars.
M.P. 149° F.

Pure Crushed Linseed,
Ground from Screened Seed.

Dalmatian Insect Powder,

From Unopened Flowers, free from added colouring matter.

ointments Levigated by Steam Power.

Spirit of Nitrous Ether.
Guaranteed of official strength.

Aromatic Spirit of Ammonia,
Distilled from Volcanic Ammonia.

Assayed Opium, Cinchona, & Scammony
Their Powders and Preparations.

Soluble Essences of Ginger, Lemon, &c.,
For flavouring Aërated Waters.

Tasteless Coated Pills.
Soluble in cold water.

Medicated Suppositories, Bougies, &c.

CHEMICAL AND PHARMACEUTICAL APPARATUS, CHEMICAL PRODUCTS
DRUGS AND CHEMICALS GROUND FOR THE TRADE.

Warehouse & Offices—2 & 4 Swan Court, Market Street; Laboratory & Drug Mills—Knowsley St., Cheetham,

MANCHESTER.

Prices Current and Catalogues on demand.

Special quotations forwarded to large buyers

INTERNATIONAL FISHERIES EXHIBITION, LONDON, 1883.

COD LIVER OIL.

The Only GOLD MEDAL
For British Exhibitors was awarded to

T. J. SMITH,
10 & 11 NORTH CHURCH SIDE, HULL.
Importer of Norwegian, Newfoundland, & other varieties.

Low Quotations on application. Delivered at London or Liverpool.

SPECIAL NOTICE.

J. JENSEN & CO.'S
NORWEGIAN COD LIVER OIL,
ICEBERG BRAND.
GUARANTEED ABSOLUTELY PURE.

The attention of Shippers and the Trade is directed to the great advantages in price and quality of this fine Brand of Norwegian Cod Liver Oil.

Messrs. J. JENSEN & CO., Proprietors, Manufacturers, and Shippers—the largest producers in the world—guarantee to deliver **ALL OILS PURE**, pale, delicate in flavour, and non-freezing.

WHOLESALE ONLY—from their Sole Agent, Mr. WALTER JACQUES, 2 Fenchurch Buildings, Fenchurch Street, or from J. JENSEN & Co., 10 St. Helen's Place, Bishopsgate Street, E.C.

BURGESS, WILLOWS & FRANCIS,
WHOLESALE & EXPORT DRUGGISTS,
AND
MANUFACTURING PHARMACEUTICAL CHEMISTS,
101 HIGH HOLBORN, LONDON.

Price Lists sent on application. Special quotations given for Shipping Orders.



PURE MENTHOL.—A1 BRAND

(THEREFORE NO STAMP REQUIRED).

No. 1.



No. 2.



No. 3.



No. 4.



No. 5.



6d., 12 in a Box.

LOOSE CONES, all Sizes.

QUOTATIONS SOLICITED.

Special Terms to Shippers
and large Buyers.

All Boxwood patterns
have Screw Tops.

No. 15.



1/-, 6 in a Box.

5 per cent. Discount for
Cash with Order, if sent
direct.

No. 14 is specially re-
commended as being a
very saleable article, both
as regards appearance
and quantity of Menthol.

No. 6.



No. 7.



No. 8.



Nos. 9 and 9a.

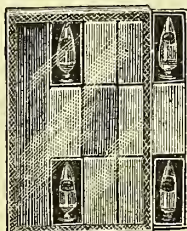


No. 14.



STYLE	GENERAL DESCRIPTION	PRICE per dozen
1	Glass Bottles with screw caps	3/8
2	In plain Willow Boxes, lid serving as holder ..	3/6
3	Glass Bottles with screw caps	5/4
4	Glass Bottles with screw caps (Menthol on wood mount, serving as holder)	6/9
5	Glass Bottles with screw caps (bullet-shaped cones wrapped in tin-foil)	6/9
6	Boxwood, ordinary shape on pedestal	5/3
7	Boxwood, barrel shape ..	6/3
8	Boxwood, acorn shape ..	6/3
9	Boxwood, skittle shape..	6/3

Nos. 11 and 12.



Order as

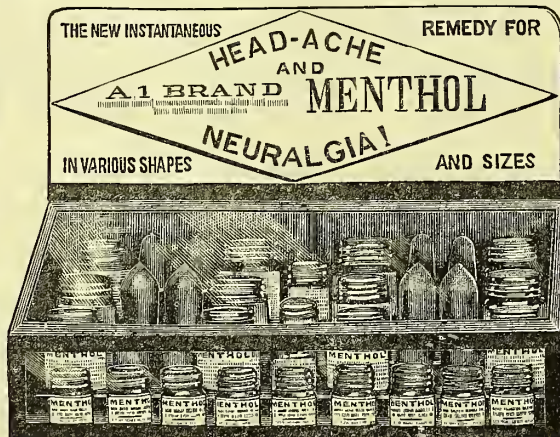
A1 BRAND

STYLE	GENERAL DESCRIPTION	PRICE per dozen
9A	Boxwood, ex. large skittle	8/-
10	6d., 12 on a Card	3/6
11	6d. Boxwood Pedestals to screw each in a separate box, 12 of which are enclosed in glass outer ..	4/-
12	Polished Sycamore Pedestals, "pull-off" lids, same shape as No. 6 ..	3/6
13	Vegetable Ivory (acorn shape) each in a box, enclosed in glass outer ..	6/9
14	Boxwood Pyramids to screw each in a separate box, 12 of which are enclosed in glass outer (very saleable)	6/9
15	6d. Cardboard, pocketable and pretty, 12 in a neat show-box	3/4

A Handsome Glass-fronted Show Case (see diagram below) given away to purchasers of 3 dozen of our Brand. This Show Case is made to hold 3 dozen A1 Brand Menthol of any shape or size, the only restriction being that 1 dozen 6d. size be not exceeded in the assortment.

NOW is the time to Stock, as the season is coming on when Neuralgia and Nerve Pains of all kinds are prevalent.

A good Show Case invariably doubles the sale of an article, and all Chemists desirous of increasing their business should entertain this.



The Case is 11 in. long by 5½ in. deep, and the lid lifts, so that the goods can be sold from it, making it both a useful and attractive addition to a Chemist's counter.

See above for prices, illustrations, etc., of separate shapes.

All our shapes can be got through any Wholesale House, or direct from

A1 MENTHOL DEPOT: 30 PATERNOSTER SQUARE, LONDON, E.C.
Proprietor—J. G. SHIRLEY.

MENTHOL CONES,

WARRANTED PURE.

3/6, 5/, 6/, and 8/ per dozen. INSIST ON HAVING CHRISTY'S BRAND. Direct Orders for Cash, subject 5 per cent. Show Cards and Counter Bills

FOR HOT CLIMATES TRY OILICURE,

For Rheumatism, Neuralgia, Headache, &c.

A Liquid Preparation, superior to Menthol Cones. 8/, 20/, and 40/ per dozen.

THOMAS CHRISTY & CO., 155 FENCHURCH STREET, LONDON,
Introducers of New Drugs.

NON-
POISONOUS,
SAFE.

TIKHEEL,

CERTAIN,
SPEEDY,
AND
PLEASANT.

The New Remedy for Neuralgia, Tic, Toothache, Nervous and Sick Headache.

ONE SIZE ONLY—HALF-A-CROWN.

Price 24/- per dozen, subject to usual Patent Medicine discount. Per gross, £11 8s., net cash, carriage paid, box free. Export Tin-lined Cases charged 7/6 each, delivered f.o.b. Remittance in full must accompany order. For less than One Gross buyers will please write their Patent Medicine House or Wholesale Druggist.

In places, still very numerous, where patents are not cut, and even, as the following letter will show, in towns where cutting is practised, retail Chemists will find it greatly to their advantage to introduce TIKHEEL. This Medicine, retailing at 2s. 6d., costs, according to quantity, from 1s. 7d. to 1s. 9d.; it thus leaves a larger profit than is gained by an ordinary 1s. or 1s. 6d. bottle of Tic Mixture. We do not suppose, nor expect, that TIKHEEL will be pushed where the only result is to make a trade for stores or cutting grocers; but there are large districts where the full price for patents is still obtained, and we shall be glad to furnish Show Cards and Counter Bills, with name and address, to all Chemists who will take up the sale of TIKHEEL.

Messrs. CLARKE & Co.

GENTLEMEN,—We think it our duty to thank you for having given us the Agency for "TIKHEEL." It has been the most remunerative of all agencies we have ever had. *We have a good, steady, increasing sale, and have never had a single complaint—which is a great deal to say.*

Your obedient Servants,

VICARY & CO.

34 BEDFORD STREET, PLYMOUTH, December 17th, 1884.

DIRECTIONS FOR USE ACCOMPANY EACH BOTTLE IN SPANISH, FRENCH, AND GERMAN.

PREPARED ONLY BY

CLARKE, BLEASDALE, BELL & CO.,
YORK, ENGLAND.

MULLEDYNE & MULLEIN EXTRACT.

COUGH, CONSUMPTION, CHEST, OR THROAT DISEASES.

DR. SULLIVAN, President Queen's College, Cork, writes:—"Mulledyne is a well-made preparation."

DR. QUINLAN, St. Vincent's Hospital for Consumptives, Dublin, writes:—"I conducted an inquiry in the hospital on the merits of the above therapeutic, which has resulted in proving that patients treated on Mullein Extract solely, and to the exclusion of Cod-liver Oil, Koumiss, or any other weight increaser, made a decided increase in weight, the cough ceased, the patients improved, and were much gratified at the treatment."

MULLEIN CIGARETTES (Patented) for Asthmatic Affections.

THE MULLEIN MANUFACTURING CO., UPPER NORWOOD, LONDON, S.E.

PRICES, 1s. 11d., 2s. 9d., and 4s. 6d.

**MENTHOL CONES,**

"ACME" BRAND. GUARANTEED PURE JAPAN MENTHOL.

NICKEL SCREW-CAPPED BOTTLES.. 6d. size, 3/4 doz.; 1/ size, 5/9 doz.; 1/6 size, 7/9 doz.
HARDWOOD BOXES, PEDESTAL SHAPE 3/6 dozen, 1/- size.
VEGETABLE IVORY, ACORN SHAPE 6/- dozen, 1/- size.
BOXWOOD, PEDESTAL SHAPE, SCREW LID 5/- dozen, 1/- size.

The "New 6d. Menthol Cone," in glass-fronted show box, 3/6 doz.

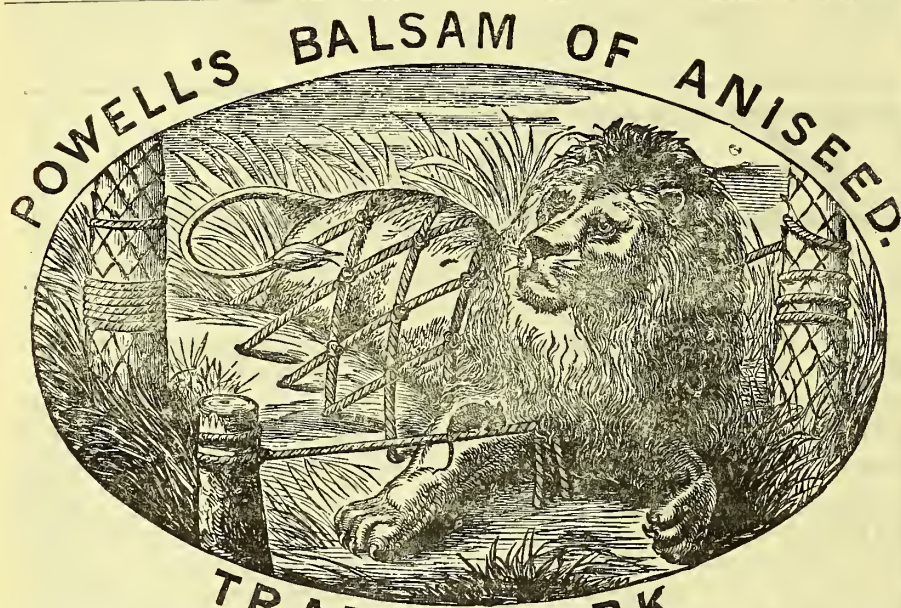
Cones supplied loose at lowest prices. 5 per cent. discount with direct orders. Quotations solicited.

HOCKIN, WILSON & CO., 38 Duke Street, Manchester Square, W.

PROPRIETORS OF THE EUCALYPTUS AND MENTHOL PENCILS.



For COUGHS, ASTHMA, BRONCHITIS, INFLUENZA, COLDS, HOARSENESS



LION, NET, & MOUSE.

ESTAB. 1824.

Prepared by **THOMAS POWELL**, 4 Albion Place, Blackfriars Road, LONDON, S.E.

"FOR THE BLOOD IS THE LIFE."

CLARKE'S WORLD FAMED BLOOD MIXTURE, The Great BLOOD PURIFIER and RESTORER.

(Registered Trade Mark—"BLOOD MIXTURE.")

The Celebrated CURE FOR Scrofula, Scurvy, Blood and Skin Diseases, and Sores of all kinds.

Wholesale of all the Wholesale Houses, less the usual discount.

Sole Proprietors, **THE LINCOLN & MIDLAND COUNTIES' DRUG COMPANY, LINCOLN.**

Counter Bills and Posters, with Name and Address, also Show Cards, on application. Printed matter supplied in any Language for Foreign Agents.

CAUTION.—The Proprietors will take immediate proceedings against all persons pirating their Trade Mark, "Blood Mixture," Labels, Wrappers, &c., or Advertisements, or in any way infringing their rights.

DR. RENNER'S ESTABLISHMENT FOR VACCINATION WITH CALF LYMPH, 228 MARYLEBONE ROAD, LONDON, N.W.

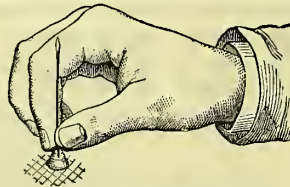
Vaccination from the Calf Daily at 11 o'clock.

Price of CALF LYMPH (Daily Fresh):

TUBES	Large	2s. 6d. each, or 3 for 7s.
	Small	1s. 2d. each, or 3 for 3s.
POINTS	Large	1s. 2d. each, or 3 for 3s.
	Small	3 for 2s. 6d.
SQUARES		2s. 6d. each.

Sent post free on receipt of remittance addressed to the Manager of the Establishment, or the following appointed Agents:—Messrs. Allen & Hanbury, Wholesale Druggists, Plough Court, 37 Lombard Street, E.C.; Mr. W. Martindale, Pharmaceutical Chemist, 10 New Cavendish Street, W.; Mr. F. K. Morrell, Chemist, 306 Kennington Park Road, S.E.; Messrs. Reynolds & Branson, 13 Briggate, Leeds; Messrs. Brady & Martin, 21 Mosley Street, Newcastle-on-Tyne; Mr. John Evans, Apothecary, 49 Dawson Street, Dublin; Mr. A. Young, Surg. Inst. Maker, 57 and 61 Forrest Road, Edinburgh; Messrs. R. Sumner & Co., Wholesale Druggists, 50A Lord Street, Liverpool; Messrs. Gregory & Wrenn, Wholesale and Manufacturing Chemists, Taunton, Special Agents for the West of England; Mr. C. T. W. Newsholme, 74 Market Place, Sheffield.

The Association
Pin-point.



Registered.

THE ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH, 12 PALE MALL EAST, LONDON, S.W. SOLE AGENTS FOR DR. WARLDMONT'S CALF VACCINE

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Three Tubes, two-thirds full, 8s.; Tubes one-third full and Lancel-charged Points, 1s. each; Pin-points, 1s. 1d. each. Eighteen Charged Small Points, 5s. Tubes two-thirds full same as those mentioned above, but without source, in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccinations daily, between the hours of 12 and 2, by the Consulting Physician, at the uniform fee of a guinea. P.O.O.'s (including postage, and crossed London and Westminster Bank), with orders, payable to
EDWARD DARKE, Secretary.



FREEMAN'S CHLORODYNE



THE ORIGINAL AND ONLY TRUE.

Discovered and Invented by **RICHARD FREEMAN** in 1844.

IT IS THE GREATEST MEDICAL DISCOVERY OF THE PRESENT CENTURY.

IT is the best known remedy for COUGHS, CONSUMPTION, WHOOPING COUGH, BRONCHITIS, and ASTHMA.

IT effectually checks and arrests those too often fatal Diseases—DIPHTHERIA, DIABETES, FEVER, CROUP, AGUE, &c.

IT acts like a charm in DIARRHŒA, and is the only known Specific in CHOLERA and DYSENTERY.

IT is the only Palliative in RHEUMATISM, GOUT, CANCER, TOOTHACHE, MENINGITIS, &c.

IT effectually cuts short all attacks of EPILEPSY, HYSTERIA, PALPITATION, CONVULSIONS, and SPASMS.

IT rapidly relieves pain from whatever cause, allays the irritation of Fever, soothes and strengthens the system under exhaustive diseases, restores the deranged functions, stimulates healthy action of the secretions of the body, gives quiet and refreshing sleep, and marvellously prolongs life. It may be taken by old and young at all hour and times.

IT is extensively used by Medical Men in their official and private practice, at home and abroad, who have given numerous written testimonials of its wonderful efficacy.

IMPORTANT CAUTION.—Four Chancery Suits terminated in favour of **FREEMAN'S ORIGINAL CHLORODYNE** and against Collis Browne and Davenport. Lord Chancellor Selborne, Lord Justice James, and Lord Justice Mellish condemned their proceedings, and decreed them to pay all costs. Reports of the suits in "Times," January 12 and July 13, 1864, and April 29 and July 24, 1873, and "British Medical Journal," May 3, 1873.

Sold in Bottles, 1s. 1½d.; 2 oz., 2s. 9d.; 4 oz., 4s. 6d.; 8 oz., 9s.; half pints, 11s.; and pints, 20s. each; and for dispensing only in bottles, fl. 8 oz. 8s., and fl. 20 oz. 18s. (in weight one pound and a half).

Purchasers are cautioned not to have palmed upon them any substitute. There are other articles bearing the name of Chlorodyne, but quite devoid of its wonderful effects. See that the Trade Mark, "The Elephant," is on the wrapper, &c., and that the words **Freeman's Original Chlorodyne** are engraved on the Government Stamp, which is the only true Chlorodyne.

SOLE MANUFACTURER—

RICHARD FREEMAN, PHARMACIST, 70 KENNINGTON PARK ROAD, LONDON, S.E.

DE VRY'S CINCHONA COMPANY NOW SUPPLY

EXT. CINCHONÆ LIQUIDUM, P.B., 1885

Certified by Dr. DE VRY to contain 5 p. c. Cinchona Alkaloids.

The above is practically the same as the Fluid Extract of Cinchona published by Dr. DE VRY in 1878, the value of which has been proved by extensive use in Continental practice, and more recently in the Government Hospitals of India.

As manufactured by us under Dr. DE VRY's guidance, the new Ext. Cinchonæ Liq. is everything that can be desired in a pharmaceutical preparation of Cinchona.

It contains a definite percentage of Cinchona Alkaloids, together with its collateral principles, unchanged by heat, oxidation, or other deteriorating cause. It is perfectly soluble.

DE VRY'S CINCHONA COMPANY, 2 FISHER STREET, RED LION SQUARE, W.C.

Consulting Quinologist, Dr. J. E. DE VRY, C.I.E., K.N.L., &c., &c., The Hague.

**** Prescribers should specify "Ext. Cinchonæ Liq., P.B. (DE VRY)." ****

BULLOCK'S PEPSINA PORCI. DOSE— 2 to 4 grains.

Since the introduction by Dr. LIONEL BEALE of PEPSINA PORCI, Mr. BULLOCK has devoted special attention to its manufacture.

BULLOCK'S ACID GLYCERINE OF PEPSINE, DOSE— 1 to 2 drms.

Possesses at least three times the digestive power (and in most cases considerably more) than any other preparation of Pepsine and Glycerine, or fluid form of Pepsine whatever.

May be prescribed with most substances compatible with Acids. In 4 oz., 8 oz., and 16 oz. Bottles, and in Bulk.

Messrs. BULLOCK & CO. beg to direct attention to an article by G. F. DOWDESWELL, Esq., B.A. (Cantab.), F.C.S., F.L.S., &c., on "Medicinal Pepsine and Artificial Digestion," which appeared in the *Practitioner* for March, 1880. In this paper Mr. DOWDESWELL gives the results of upwards of 100 experiments which conclusively demonstrated the marked superiority of BULLOCK'S PEPSINA PORCI and ACID GLYCERINE OF PEPSINE over every other Pepsine or Preparation of Pepsine—ENGLISH, FRENCH, GERMAN, or AMERICAN; and confirmed the equally favourable reports of Dr. AUVY (1863), Professor TUSON (1870), and the late Professor GARROD (1878), as to the pre-eminent value of BULLOCK'S PEPSINA PORCI. It may be added that many Pepsines and their preparations sold are inert.

**** In prescribing either of the above preparations, it is suggested to insert in parenthesis as follows (BULLOCK). ****

J. L. BULLOCK & CO., 3 Hanover St., Hanover Sq., LONDON, W.

HENRY'S GREAT INDIAN REMEDIES



(FOR EXTERNAL APPLICATION.)

THE Cure for

Neuralgia	Stiffness from violent exercise	Paralysis
Sciatica	Swellings	Chilblains
Nervous Headache	Stiff Neck	Corns
Cramps	Sore Throat	Piles
Burns and Scalds	Asthma	Cuts and Wounds
Pains generally	Bronchitis	Ringworm
Rheumatism	Coughs	Bruises
Lumbago	Mumps	Erysipelas
Gout		Convulsions

N.B.—"THILUM" does not contain mercury, opium, aconite, or any deleterious ingredient.

The following **TESTIMONIALS** are taken from hundreds that have been received from various parts of the world:—

Henry's "Thilum" has been used in my own family, and its use recommended by me to others. As an emollient, anodyne, and detergent application, it is one of surpassing virtue. In rheumatic affections, its efficacy, when well rubbed in, cannot be questioned, while its fragrance effectually meets one of the greatest objections to unguents in general.
Barmore, Bridge of Allan, W. J. VANSOMEREN, M.D.,
23rd June, 1881. Surgeon-General (Madras retired).

Bronchitis, Cramps, &c., during Pregnancy, Rheumatism, &c.—Your "Thilum" cured my baby (three months old) of severe bronchitis. Last Friday week he was so ill that the doctor told me his case was *hopeless*. On the Sunday night following I applied "Thilum," and the next morning he was much better, and another rubbing with the ointment effected a perfect cure. For the benefit of wives and mothers, I wish to say to all that I have also proved "Thilum" to be invaluable for cramps of the very worst kind, and also for other aches and pains from which I suffered much both before and after my recent confinement. I cannot express the relief and comfort the ointment always afforded me, and only wish more women knew of its special suitability for them, as I am sure they would use it if they did. I have also used "Thilum" for rheumatic pains in the shoulders and different parts of the body, and, having proved its excellent virtues, should now be sorry to be without having it near at hand.
SUSAN FRYER.
Strathmore Road, Croydon, December 12, 1884.

Chilblains.—I should like you to know the good effect your "Thilum" had on my chilblains. I had about twenty on my feet, when I was advised to try your ointment, and after using one little box of it the chilblains were quite cured.
M. FORDYCE.
St. Mary's Vicarage, Maryport, December 8, 1884.

Prices—1s. 1½d., 2s. 3d., and 4s. 6d. per Box.



For

Rheumatism	Cuts and Wounds	Swellings general
Wind-stroke	Broken Knees and	Sore Shoulders and
Sprains of all sorts	Bruises	Spavins [Bac]
Sprung Tendons	Cracked Heels	Heat Lumps
Sore Throat	Over reaches	Bites and Stings
Influenza	Œdema or Swelling of the Legs	Flies and Noxious Insects
Stiffness		
Mange and other Skin Diseases and all irritable conditions of the Skin.		

TESTIMONIALS.

I tried your sample of "Hippacea" on one of my horses with a sore hair. It was a very severe case, caused by a side-saddle when hunting in a hilly country. I found it heal the wound and also encourage the growth of the hair more quickly and better than any remedy I have ever yet tried, and in a slight case it was really wonderful. Being the hunting season, and a horse so liable to hurt, I sent at once for more "Hippacea," not caring to be without it in my stables, having found its really excellent virtues.
Moutpeller Riding School, Bath, JAMES ROBERTS,
November 25, 1884. Riding Master

I have used "Hippacea" for some months, and have found it most beneficial for cuts, bruises, and sore hoofs among my horses. Any wound heals very quickly.
Madras, 21st May, 1884. J. H. PEEBLES

I tried your "Hippacea" on the throat of a young mare suffering from influenza. She was well in three days. Her companion caught the same complaint, and I left it to nature in order to prove the remedy, and she has been coughing and running at the nose for a fortnight. Please send me another tin of "Hippacea," as I do not want to be without it in my stable.
Royal Crescent Mews, Bath, JOHN TALL,
November 29, 1884. Livery Stable Keeper

Prices—2s. 9d., 5s. 6d., and 11s. per Pot.

HENRY'S

"JVARA-HARI," or FEVER DESTROYER.

For Fevers of all sorts, Colds, and as a Tonic.

Prices—1s. 1½d., 2s. 3d., and 3s. 9d. per Bottle.

HENRY'S

"COMP. ESS. of OMUM and CAMPH."

For Cholera, Indigestion, Flatulence, Colic, Spasms in the Stomach and Bowels, as also for Dysmenorrhoea (painful menstruation).

Prices—1s. 1½d. and 2s. 3d. per Bottle.

HEAD OFFICE:

2nd LINE BEACH, MADRAS.

MANUFACTORY:

MADRAS, INDIA.

CENTRAL DEPOT FOR EUROPE:

F. H. BOWDEN, 29 LANSDOWNE ROAD
CROYDON, SURREY, ENGLAND.

N.B.—Agents (Wholesale and Retail) required everywhere. Good terms offered if references are satisfactory. Correspondence in English, Spanish, French, German, and Italian.

HEARON, SQUIRE & FRANCIS,

WHOLESALE AND EXPORT DRUGGISTS,
MANUFACTURING, PHARMACEUTICAL,
ANALYTICAL CHEMISTS.



TRADE MARK.

ESTABLISHED OVER A CENTURY.

The new Preparations and Chemicals of the British Pharmacopœia, 1885, have been added to Stock.

A revised PRICES CURRENT, in which are included the recent introductions of the P.B., has been prepared, and will be supplied on application.

SELECT PREPARATIONS OF THE "HERON" BRAND:—

Concentrated Soluble Essences of
Ginger and Lemon.

Ess. pro Mist. Ferri Co.

Liq. Santal Flav. Co.

Sol. Bismuth Aromat.

Infants' Food (malted in bulk).

THIS SEASON'S GREEN EXTRACTS IN VACUO.
SYRUP RHÆADOS NOV. SYRUP MORI NOV.

CONCENTRATED INFUSIONS, LIQUORS, & LIQUID EXTRACTS IN VACUO.

5 COLEMAN STREET, LONDON.

IMPORTANT NOTICE.

£200 Reward. PIRACY. £200 Reward.

*The above reward will be paid by the Proprietors of "**LIEBIG'S CHEMICAL FOOD**," or Wine of Phosphates, to any person or persons who shall give such information as will lead to the discovery and conviction of any one making or offering for sale spurious or forged imitations of their proprietary article.*

To OBVIATE FURTHER PIRACY, the following alterations have been made:—

The words "**LIEBIG'S CHEMICAL FOOD**" are now engraved on the Government Stamps, the words in water mark on the Labels, as well as being moulded on the Bottles.

The Proprietors therefore request all Chemists and Patent Medicine Vendors to RETURN for exchange ANY STOCK they may have of "LIEBIG'S CHEMICAL FOOD," or Wine of Phosphates, to either their Wholesale House or direct to them,

12 York Buildings, Adelphi, London, W.C.

In all our Advertisements from this date, the attention of the Public will be called to these alterations, and they will be requested on'y to purchase such Bottles as have the Name Engraved on the Government Stamps, and the Name in Water Mark on the Labels.

MORISON'S PILLS, POWDERS AND OINTMENT

The most Safe, Efficacious, and Prompt **VEGETABLE MEDICINE** for Family Use.
COMPOUNDED OF THE PUREST VEGETABLE INGREDIENTS ONLY.

FIFTY-FIVE YEARS OF UNINTERRUPTED SUCCESS.

Pills in Boxes at 7½d., 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Powders, 1s. 1½d. Ointment, 1s. 1½d. and 2s. 9d.

Wholesale: BRITISH COLLEGE OF HEALTH, 33 Euston Road, London
And of the Principal Chemists and Druggists throughout the Kingdom.

Chemists and others who require
Hand Bills or Posters with
name and address are re-
quested to write
for same.

LOWE'S PILLS.
Trade Mark Registered, No. 39,661. **FOR**
THE HEAD,
STOMACH & LIVER.
AN EXCELLENT PILL FOR
PROMOTING APPETITE AND DIGESTION.

Sold by all Chemists and Patent Medicine Dealers, in Boxes, at 13½d. and 2s. 9d. each; or post free from the Proprietor, ROBERT HENRY LOWE, Bills on Road, Wolverhampton, upon receipt of the price in Postage Stamps.

COLONIAL AGENTS WANTED.

W. F. SMITH'S TASTELESS DANDELION ANTIBILIOUS PILLS

Price, 1s. 1½d. and 2s. 9d. per Box.

Registered.] TARAX. AND PODOPH. [Registered.

A NON-MERCURIAL LIVER MEDICINE, specially useful to the habitually constipated, and safe for all ages. Worthy of trade notice. Reliable, and rapidly increasing in public acceptance.

Urgent caution needed against injurious imitations.

PREPARED ONLY BY

W. F. SMITH, M.P.S.,
280 WALWORTH ROAD, LONDON.

To be had of the usual Houses at Home and Abroad.

SCHIEFFELIN'S

Are made of the best materials; perfectly protected; entirely and quickly soluble coated while soft; not subjected to the injurious effects of heat in the process of manufacture. The mass is worked to the highest possible degree of uniform intermixture, and subdivided with scrupulous exactness. The coating is an inert

tasteless, and odourless compound, which is so transparent, colourless, and thin, that the distinctive colour of each pill is revealed through the coat. No sub-coating is used. The solubility of the coating is not impaired by age. All the official pills, as well as any others ordered by the Medical Profession, can be furnished in this form. They can be implicitly relied upon in every respect. The coating, while thoroughly protecting the pill, will not be found to in any way interfere with the action of the drug, and those who have found sugar or chalk-coated pills objectionable, owing to the liability of the coating becoming insoluble by age, will find our coating to dissolve as readily after many years as when first prepared. It, moreover, does not form a hard tough shell, as is the case with the ordinary gelatine coating. We claim and believe our Coated Pills to be nearer perfection than any similar goods that have been offered, and guarantee the pills to be as quickly effective as any uncoated pills that can be made.

SOLUBLE

PILLS.

ALLEN & HANBURY'S, Plough Court, Lombard Street, LONDON,
And 7 VERE STREET, CAVENDISH SQUARE, W.

RUSPINI'S STYPTIC, FOR STOPPING ALL BLEEDINGS.

Bottles, 2/, 4/6, and 10/6 each.

In Bulk, for Dispensing and Hospital and Medical Sale.

"LIQUOR STYPTICUS R."

In 3, 5, 10, & 20 oz. Bottles, at 1/ per oz.,

Less 25 per cent. discount to the Trade for Cash Orders.

MR. RUSPINI continues to receive satisfactory medical reports on the value of this powerful medicine.

AGENCIES solicited in NEW YORK, ST. LOUIS, QUEBEC, and MONTREAL, to introduce Samples to the Profession.

HOLLOWAY'S PILLS & OINTMENT

Have the Largest Sale of any Medicine in the World.

MANUFACTURED ONLY AT

Professor HOLLOWAY'S Establishment,

78 New Oxford St. (late 533 Oxford St.), London.

And sold at 1s. 1½d., 2s. 9d., 4s. 6d., 11s., 22s., and 33s. each Box or Pot.

Chemists and Druggists selling "Holloway's Pills and Ointment" can, on application to the above address, or to the Wholesale House with whom they deal, be supplied free of charge with Handbills and Posters with their name and address printed at foot.

Wholesale Terms see List of "Proprietary Articles" in most Price Currents.

See Index, pages 39 and 40.

A WONDERFUL MEDICINE!

Between thirty and forty years ago a Medicine was introduced to the public and suffering humanity was invited to try the same.

The Proprietor knew from experience that success was certain, but the human breast is so imbued with prejudice, that it forms one of the strongest barriers to break down and the greatest enemy to overcome before any headway can be made towards the mansion of success. Truth has often proved itself to be "stranger than fiction," and it is a fact as solid as truth that

BEECHAM'S PILLS

have now become one of the leading Patent Medicines of the present day. From north to south, and from east to west, they are to be found in the homes of the rich and the poor. All classes of society use them, and they are by thousands declared to be

WORTH A GUINEA A BOX.



TRADE MARK.
No. 1416.

For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like "MAGIC," and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long-lost complexion, bring back the keen edge of appetite, and arouse into action, with the ROSE-BUD of health, the whole physical energy of the human frame. These are "FACTS" admitted by thousands, embracing all classes of Society, and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS have the LARGEST SALE of any Patent Medicine in England.

In South Africa BEECHAM'S PILLS have the largest sale of any Patent Medicine ever introduced into that part of the World.

All Patent Medicine Dealers abroad will find BEECHAM'S PILLS one of the most profitable and one of the best selling articles in the Market. The demand for them is regular, and all Foreign Houses who are desirous of getting a First-class Patent Medicine are respectfully requested to get BEECHAM'S PILLS from the leading Wholesale Houses in England (as no business will be done with any Foreign House by the Proprietor direct).

CAUTION.—The Public are requested to notice that the words "BEECHAM'S PILLS, ST. HELENS," are on the Government Stamp affixed to each Box of the Pills; if not on, they are a Forgery.

Prepared only, and Sold Wholesale and Retail, by the Proprietor,

THOMAS BEECHAM,
ST. HELENS, LANCASHIRE, ENGLAND.

In Boxes, 1s. 1½d. and 2s. 9d. each.

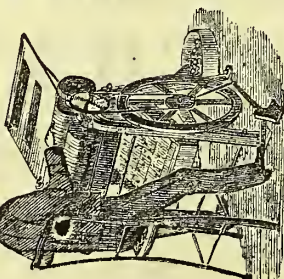
N.B.—FULL DIRECTIONS ARE GIVEN WITH EACH BOX.

J. W. PINDAR'S NEW ROTARY PILL MACHINES,

As now used by Messrs. Holloway, Cockle, Cox, and all the principal Pill Makers in England, Australia, America, and France.

Fig. A.

Rotary Machine, Fig. A.—This invention consists in a novel and improved arrangement of Machinery, whereby any description of Pill Mass can be converted into Pills, at the rate of from 15 lbs. to 40 lbs. per hour, according to the size of the Machine used.

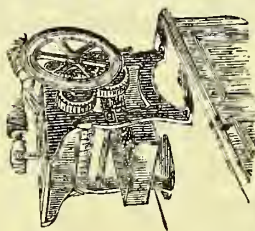


ROTARY PILL MACHINES.

Fig. A.—No. 1...£12 12s.
" 2...£15 15s.
" 3...£20 0s.

Fig. B.

Fig. B.—A small useful Machine, capable of making 10 lbs. of Pills per hour, particularly adapted for persons making small quantities, at £7 15s.

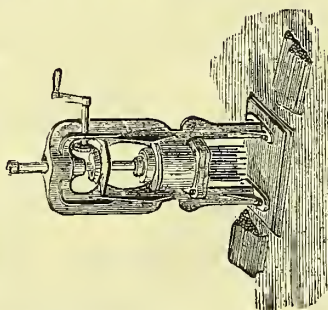


Press suitable for same, £2 15s.

Any of the above can be made to cut two or three different size Pills, at an additional cost for extra Rollers and Plates.

Fig. C.

Fig. C. is the Improved Press for Piping, by means of which a great quantity of Mass can be Piped in a few minutes truer than by the old method of rolling.



PIPING PRESSES.

No. 1. ... £3 0s.
Fig. C.—No. 2... £5 10s.
" 3... £8 0s.
to hold 1 Gallon, price £3 10s.
£1 10s. extra for every additional Gallon.

NEW PATENT "ECCENTRIC" PILL COATER,

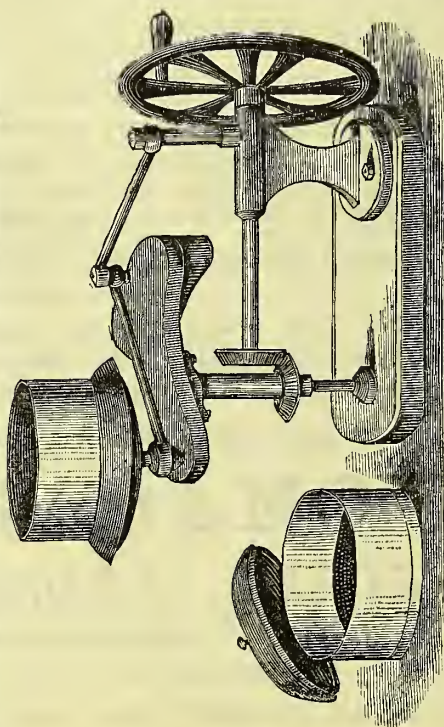
Invented and made by
J. W. PINDAR, Patentee.

By an entirely new arrangement of mechanism this machine is constructed in a manner which supercedes all others, as, owing to its "Eccentric" motion, the Pills—which may be coated with Pearl, Silver, Gold, or Sugar, &c. &c.—are thoroughly separated from each other during the process, and retain their original spherical form, whilst being thrown round the receptacle with remarkable velocity.

These machines are equally adapted for coating large or small quantities; thus, a machine constructed for and suitable for coating 20 lbs. will coat 1 lb. only with equal efficacy, and in the most satisfactory manner.

Each machine is supplied with a Drug 6 or Powder Sifter, to be attached if required, and which, fitting to top of Pill 0 Receptacle, is subject to the same "Eccentric" motion as above mentioned.

This addition will be found of great advantage in the



PRICES:
No. 1.—For 2 lbs. ... £2 5 0 Sifter for same ... £0 7 6
No. 2.—For 5 lbs. ... 3 15 0 " " " " " " 0 15 0
No. 3.—For 10 lbs. ... 5 15 0 " " " " " " 1 5 0
No. 4.—For 20 lbs., on Iron Standard, for Steam, Gas, or other power, £15 15s.—Sifter for same, £2 5s.

The smallest machines can be worked on Steam Power at a small additional cost.

Mr. J. W. PINDAR.
224 Strand, 13th March, 1866.
SIR,—I have much pleasure in stating that the Pill Machine which you made for me answers remarkably well, as the Pills are far better than those by hand-machines, and with much less waste. I can, therefore, confidently recommend it as a very excellent one, a great saving of labour, and consequently expense.—I remain, yours faithfully,
THOMAS HOLLOWAY.

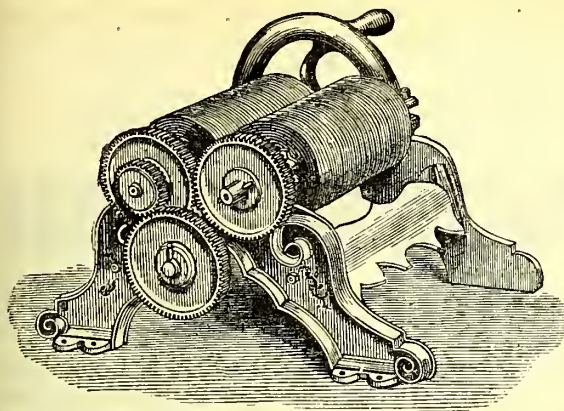
338 Oxford Street, opposite Great Portland Street, Feb. 11th, 1871.
SIR,—The Rotary Pill Machine and Press which we had from you for a special order answered very satisfactorily.—We are, sir, yours respectfully,
JOHN BELL & CO.

3 Crane Court, Fleet Street, Feb. 14th, 1871.
To Mr. J. W. PINDAR.
Dear Sir,—We have now used your Rotary Pill Machine about six years, and find it answers better than any we had previously used, and makes the Pills of a very regular size.—Yours truly,
T. WHELPOTON.

29 Murray Street, New York, and Farringdon Road, London, Nov. 9th, 1880.
Dear Sir,—Your letter of inquiry came duly to hand. As I always told you, the Pill Machine in operation at my London warehouse has given entire satisfaction. So have those we are using in this country. We can make smooth, round Pills of uniform size at a very small expense. I can safely say that your Pill Machine is all that you claim it to be—a perfect Machine.—Yours truly,
A. J. WHITE.

Testimonials from all parts of the world may be seen on application to

J. W. PINDAR,
75 New Church Road, Camberwell,



T. S. COCKING'S DOUBLE-ACTION PILL MACHINE.

A Handsome Ornament for any Counter.

Reduced Price, £8 net.

By a fresh adaptation both 4 and 5 gr. Pills may be made without change of cylinders. Write for Circular.

T. S. COCKING, Chemist
SITTINGBOURNE, KENT.

AGENTS—ANY SUNDRY HOUSE.
Small Pipers, 50/; Burnisher, 6/.

ESSENCE OF COMPOSITION POWDER. "RAIMES & CO."

We have given special attention to the manufacture of this "Composition Essence," which is rapidly obtaining considerable popularity in the North of England, being much preferred to COMPOSITION POWDER, not only as a family medicine, but as a pure stimulant free from alcohol.

Price 1s. 6d. per lb. in Winchester Quarts. 5 per cent. discount.

Sample and special quotation for quantity on application.

RAIMES & CO., WHOLESALE DRUGGISTS, **YORK & EDINBURGH.**

ESTABLISHED 1843.

THOMPSON & CAPPER, WHOLESALE AND EXPORT HOMŒOPATHIC CHEMISTS,

55 BOLD STREET, LIVERPOOL,

And (late HENRY TURNER & CO.)

51 PICCADILLY, MANCHESTER.

ILLUSTRATED PRICE LIST ON APPLICATION.

THOMPSON & CAPPER have now for many years, with the greatest benefit to the Agents throughout the world, supplied, *free of cost*, Books for Gratuitous Distribution, compiled by themselves, containing complete directions for using the Homœopathic Medicines, a plentiful distribution of which invariably ensures a large sale. Handbills also, with name, *ad lib.*

THOMPSON & CAPPER'S DENTIFRICE WATER.

Sells well everywhere, its beneficent qualities being attested to by physicians in all parts of the world. (*See Testimonials.*)

In 1s. 6d., 2s. 6d., 4s. 6d., and 8s. 6d. Bottles.

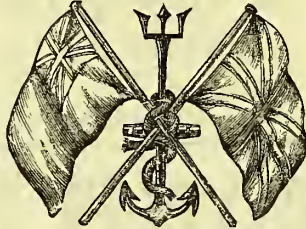
Wholesale Agents for the Dominion of Canada:—EVANS, SONS & MASON, Limited, MONTREAL.

SUGAR COATED PILLS

R. HAMPSON prepares the Pills of the Pharmacopoeia, and a great variety of Pills from convenient formulæ; also Pills from private formulæ. The Pills are made of the best ingredients, and being QUICKLY and perfectly diffusible, invariably give satisfaction. A Price Current, with formulæ and sample, post free. Supplied direct or through the Wholesale Houses. Special quotations for large quantities.

205 ST. JOHN STREET ROAD. E.C.

PREPARED BEFORE AUGUST, 1875.



KING'S HOP BITTERS

Are the old-established British Preparation and are "GENUINE HOP BITTERS," made only in Great Britain. Registered and Protected under the Trade Marks Act. They are an excellent aromatic tonic, very palatable, and command a large sale. Put up in bottles to retail at 1/1s and 2/3, also in packets containing ingredients for making Hop Bitters, 7/4d and 1/1s. N.B.—Each Bottle and Packet bears the above Trade Marks. Beware of Imitations.

MANUFACTURED ONLY BY

ALFRED KING & CO., King's Hop Bitters Depot, Croydon London, S.E.

Special Agents appointed in all parts. Cards, Transparencies and Testimonials supplied. For further particulars apply as above.

Agent for New Zealand, R. Ayres, Chemist, Taranaki, & Molesworth St., Wellington. Small Sample Export Orders for enclosure will receive prompt attention.

BATH GLOVES, ENEMAS, ETC. LATEST REDUCED PRICES.

Post free to Chemists only on receipt of Trade Card.

JOHN CENTRETON,
24 NILE STREET, CITY ROAD, LONDON, N.

PHARMACEUTICAL NOVELTIES.

Dealers and Manufacturers of PHARMACEUTICAL and DRUGGISTS' SUNDRIES, and all genuine Novelties, are requested to send SAMPLES and Price Lists to the undersigned, who is willing to undertake Agencies for the Continent. He has at command great experience, an excellent medium for announcements, many travellers, &c. Correspondence and samples to be addressed to

ADOLF VOMACKA, Leitmeritz, AUSTRIA.

A PERFECT BOON TO MOTHERS!

ROGERS' "NURSERY"

HAIR LOTION.

One application is guaranteed to destroy all Nits and Parasites in Children's Heads, and immediately allay the Itching and Irritation.

It is now used in Thousands of Families with the greatest success, and all who have tried it are delighted with the effect, and declare it to be worth A GUINEA A BOTTLE.

PREPARED ONLY BY

WILLIAM ROGERS,
CHEMIST.

BEN JONSON ROAD, STEPNEY, E.
Sold in large Bottles, price ONE SHILLING. Sample Bottle, 7d.

SOLD BY ALL CHEMISTS AND PERFUMERS.

Observe! Genuine only in Yellow Wrapper, White Label. WHOLESALE AGENTS.—Barclay & Son; Edwards & Son; Maw, Son & Thompson; Millard & Son; Sanger & Sons; Thompson & Co., Limited; Butler & Crisp; Hovenden & Sons; Newbery & Sons.

The fatal effects frequently following the use of Narcotics in Patent Medicines suggested to the Proprietor of

STEDMAN'S TEETHING POWDERS



the advisability of having his Powders tested by Dr. HASSALL, the result of whose analysis is certified below, hence vendors need be under no apprehension of the pain, trouble, and censure connected with most inquests, the occasional result of fatal doses of Patent Medicines.

STEDMAN'S TEETHING POWDERS.

THE ANALYTICAL INSTITUTION,

54 HOLBORN VIADUCT, E.C.

LONDON, 29th Nov., 1877.

REPORT ON THE TEETHING POWDER PREPARED BY
MR. JAS. STEDMAN, HOXTON.

I hereby certify that I have purchased a sample of STEDMAN'S Teething Powder, and have, at the request of the Proprietor, subjected it to Analysis for Morphia or Opium in any form.

I am enabled to state that I found the sample in question to be absolutely free from Morphia, or any other Alkaloid or constituent of Opium.

Thus STEDMAN'S Teething Powder is favourably distinguished from similar preparations.

ARTHUR H. HASSALL, M.D.

Thus Vendors need not be under any apprehension of interference either by Police or Coroner, as the FREEDOM FROM NARCOTIC removes Stedman's Teething Powders from the "Scheduled Poisons" List, and prevents the possibility of inquests on account of the administration of these Powders.

STEDMAN'S TEETHING POWDERS

are best distinguished by their proper brand, a Gum Lancet (as above), which specify in ordering.

Price 78/- per gross net.

Eight 11s. Boxes, each containing 216 Powders, for £4 net.

SEIDLITZ POWDERS.

Full Size, and Prepared throughout with Howard's Materials.

Loose, 5s. 6d. per gross; in 1 doz. Coloured Boxes, Wrappers, &c., 6s. per doz. net.

TERMS—Cash with Order.

DRUGS PACKED FOR THE COLONIES.

MANUFACTORY:—

25 NEW NORTH ROAD, HOXTON, LONDON, N.

E. GOULD & SON,Chemists by Appointment to the London Homœopathic Hospital,
Manufacturers and Importers of**HOMŒOPATHIC MEDICINES**

AND

HOMŒOPATHIC SUNDRIES OF ALL KINDS.

PRICE LISTS OF MEDICINES, MEDICINE CHESTS, &c., POST FREE TO ANY PART OF THE WORLD.

59 MOORGATE STREET, LONDON, E.C.**HOMŒOPATHIC MEDICINES.**

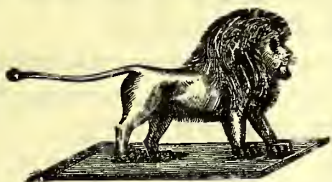
THE BRISTOL AND WEST OF ENGLAND

HOMŒOPATHIC MEDICINE SUPPLY,**37 HIGH STREET, BRISTOL.**

IMPORTANT TO CHEMISTS, PATENT MEDICINE VENDORS, AND HOMŒOPATHIC MEDICINE AGENTS.

In view of the increasing demand for Homœopathic Medicines, and to remedy the present unsatisfactory system upon which Agents are supplied, the Proprietor of the BRISTOL AND WEST OF ENGLAND HOMŒOPATHIC MEDICINE SUPPLY has designed and fitted up for the special use of Agents a Cabinet containing an assortment, in bulk, of all the medicines in general use; the Cabinet, which is arranged to stand on any ordinary counter, is fitted with drawers to open from behind, and contains in top drawer 36 four-ounce bottles filled with Tinctures, and the corresponding drawer containing 36 four-ounce bottles filled with Pilules—in all, six dozen bottles and 36 kinds of Medicines of the usual strength sold by Homœopathic Chemists; the bottom drawer will contain a supply of not less than two gross of bottles, in cases, two-drachm and half ounce, clean and corked ready for filling, also a supply of labels, and not less than 100 Books or Guides to the uses of the medicines; the price of the Cabinet and contents is £5 net cash, and the advantage to the Agent will at once be seen from the fact that the same quantity of medicines, if put up in the usual way ready for sale, the invoice price from the Wholesale House to the Agent would be £18 or thereabout; another advantage to the Agent is, that he will always be in a position to refill Customers' bottles when required. Agents can have the bottles replenished at any time, or new bottles of any medicine, tincture, or pilules will be sent carriage paid at 12s. per dozen. Special quotations for Medicines, ready put up for sale, also for special and proprietary articles.

For further particulars as to terms, &c., apply to the Proprietor of the

BRISTOL AND WEST OF ENGLAND HOMŒOPATHIC MEDICINE SUPPLY,
37 HIGH STREET, BRISTOL.TRADE MARK
REGISTERED
OVER ALL THE
GLOBE.**E. BURGESS'**
LION OINTMENT AND PILLS.

Photographs of Cases Cured, neatly framed for exhibition, Transparencies, Bills with Name, &c., forwarded direct or through any Wholesale House. Plenty of Advertising Matter supplied to Chemists willing to push the sale.

E. BURGESS, 117 HIGH HOLBORN, LONDON, W.C.**M. A. CRAVEN & SON,**
WHOLESALE AND EXPORT CONFECTIONERS,

MAKERS OF

Medicated Lozenges, Refined Liquorice, Jujubes, and every description of Confectionery,

IMPORTERS AND MANUFACTURERS OF LEMON, ORANGE, AND CITRON PEELS.

EBOR CONFECTIONERY WORKS.
YORK.

Lozenges of all descriptions made from Customers' private formulæ (or ingredients), and stamped with any name or device.

SPECIALITIES—Cough, Peppermint, Rose, Musk, Bouquet, Cachou, and all kinds of Medicated Lozenges.

ESTABLISHED 1843.

PRICE LIST ON APPLICATION.

JAMES EPPS & CO.'S

(FIRST ESTABLISHED)

HOMOEOPATHIC MEDICINES

Are supplied direct or through the PATENT MEDICINE HOUSES.

Small quantities are conveniently sent by PARCEL POST.

FOR ILLUSTRATED GUIDE AND PRICES APPLY TO

48 THREADNEEDLE STREET.

Prize Medal Awarded, International Inventions Exhibition, London, 1885

CORRUGATED PAPER.

FOR PACKING BOTTLES AND FRAGILE ARTICLES.

Is lighter and more secure than anything yet introduced as a Parcel Post Wrapping. For transmission of filled bottles—for Quarts, roll the material three or four times tightly, and for Pints two or three times. Very small bottles require only single wrapping.

The CORRUGATED PAPER should extend half an inch beyond the ends of the bottle.

Roll tightly and fold in the ends. The elasticity of the material will keep the bottle rigidly in its place.



SOLD IN ROLLS.

250 feet long, 26 inches wide	..	..	..	..	..	20/
100 " " "	..	..	..	..	..	10/
50 " " "	..	..	..	..	..	6/
25 " " "	..	..	..	..	post paid	4/6

The Material can be cut to any size with an ordinary pair of Scissors.

THOMPSON & NORRIS MANUFACTURING COMPANY, LIM.,

ARLINGTON STREET WORKS, ISLINGTON, LONDON, N.

BROOKLYN, N.Y., U.S.A.
10 to 34 Prince Street.

ST. DENIS, PARIS.
205 Avenue de Paris.

BOSTON, MASS., U.S.A.
116 to 120 *Fulton Street.*

Trade Notice.1



Trade Notice

ATKINSON & BARKER'S

ROYAL INFANTS' PRESERVATIVE.

Established by 90 years' experience as a safe and effective Medicine.

Sold universally by Chemists and Patent Medicine Dealers.

WHOLESALE AND EXPORT ORDERS SUPPLIED FROM THE MANUFACTORY—

11 RUSSELL STREET, DOWNING STREET, MANCHESTER.

SHOW CARDS AND BILLS ON APPLICATION.

Mariazell stomach-drops.

An excellent remedy for all stomachic complaints.

Indispensable in cases of loss of appetite, weakness of the stomach, bad breath, flatulency, nausea, colic, cold in the stomach, heartburn, formation of sand and gravel, excess of mucus, jaundice, distaste, vomiting, sick-headache, spasms, constipation, over eating and drinking, worms, hypochondriasis, liver-complaint and hemorrhoids.

Price per bottle, including directions for use, 1s. 1½*d.* and 2s. 3*d.* Central dépôt:

Carl Brady, Chemist, **Kremsier**, Moravia (Austria).

Sole consignee for England:

S. Morris, London, W. 33 North Audley Street, Grosvenor Square.

To be had retail of all Chemists and all Wholesale Houses in London.



ONLY GENUINE WITH THIS TRADE MARK.

Cough-No-More



(Huste-Nicht)

L. H. PIETSCH & CO.'S
Honey-Herbs-Malt-Extract

Warranted entirely free of all injurious ingredients.

THOUSANDS
OF TESTIMONIALS RECEIVED;
ALSO LETTERS OF THANKS

From the Society of the Red Cross for
Nursing Sick and Wounded Soldiers in
St. Petersburg,

Under the Patronage of Her late Imperial Majesty
the Empress of Russia.

Madame ADELAIDE RISTORI.
Right Hon. W. E. GLADSTONE, M.P.
Right Hon. JOHN BRIGHT, M.P.
Right Hon. SIR ARTHUR OTWAY, M.P.
Right Rev. LORD BISHOP OF MANCHESTER.
Right Rev. LORD BISHOP OF SALFORD.
Right Rev. LORD BISHOP OF Breslau.
His Highness DUKE ERNEST II., of Coburg-
Gotha.
His Majesty KING CHARLES I., of Roumania.
His Serene Highness PRINCE BISMARCK, Im-
perial German Chancellor.
His Excellency Field-Marshal VON MOLTKE.
His Holiness POPE LEO XIII.
&c. &c. &c.

MACK'S DOUBLE STARCH

SUPERIOR and CHEAPER in
use than any other.

Advantages:—

1. It gives the Linen an UNUSUAL STIFFNESS, ELASTICITY, and a BEAUTIFUL GLOSS. No Borax, &c., needed.
2. IRONS with the GREATEST EASE WITHOUT STICKING to the iron.
3. The Linen need NOT BE DRIED after washing, but can be IRONED AT ONCE.
4. This Starch containing NOTHING INJURIOUS, the Linen is WELL PRESERVED by its use.

Order direct from

P. R. DAVID,
10, Acomb Street, Manchester,
Sole Representative for the United Kingdom.

ONLY GENUINE WITH THIS TRADE MARK.

Cough-No-More



(Huste-Nicht)

L. H. PIETSCH & CO.'S
Honey-Herbs-
Malt-Extract,

Warranted entirely free of all injurious
ingredients.

The Best Remedy for Affections of
the Throat, Asthma, Bronchial
Catarrh, Bronchitis, Cough, Con-
sumption, &c., &c.

WHOLESALE AGENTS—

Messrs. Jas. Woolley, Sons & Co.,
Market Street, Manchester.
At 1/9, 2/9, and 4/6 the Bottle.
Caramels 1/1½ the Bag.

THE

P. R. D. CLEANING POWDER,

FOR

Domestic, Trade, & Industrial Use.

The CHEAPEST, CLEANLIEST, and MOST
EFFICACIOUS POLISHING POWDER yet
introduced for cleaning ALL KINDS OF
METAL GOODS, SILVER PLATE, GOLD,
JEWELLERY, GLASS, &c., &c.

Used in the German Army SOLELY
and EXCLUSIVELY since its invention.

Warranted NOT to INJURE the most
DELICATE metal work.

Made in six different degrees of fine-
ness, and sold at 4d., 5d., 6d., 7½d.,
1s., and 1s. 3d. per package.

On receipt of One Stamp a Sample of
each No. will be sent post free to any
address by

P. R. DAVID,
10, Acomb Street, Manchester,
Sole Consignee for the United Kingdom.

RISTORI EAU-DE-COLOGNE. Manchester.



St. Petersburg.

ONLY GENUINE WITH THIS LABEL.

PATRONAGE kindly accepted by Madame
ADELAIDE RISTORI.

Refreshing, Invigorating, Best of all Brands.

OPENS WITHOUT CORKSCREW.

THE MOST AGREEABLE DISINFECTANT KNOWN.

THE BEST AND NICEST PERFUME EXTANT.

NONE without this Stamp in RED on

Label & Cork



is genuine.

"Prove all things; hold fast that which is good."

THE

P. R. D. CLEANING POWDER,

For Domestic, Trade, and
Industrial Use.

Testimonial from
United Small Arms Factories,
Birmingham.

"The Polishing Powder is in
GENERAL use at our Factories, and
has so answered its purpose that
we have DISCONTINUED all other
PREPARATIONS of the KIND, and
EXCLUSIVELY use YOUR INVENTION;
the metal is in no way affected by
its use; tarnish is easily removed,
and the polish which results is
lasting and stands well the influ-
ence of the atmosphere."

For Trade Prices of any of the above Specialities apply to Wholesale Houses, or direct to

P. R. DAVID, 10, Acomb St., MANCHESTER,

Sole Consignee for the United Kingdom and the Colonies.

N.B.—AGENTS APPOINTED.

LINT.**GAMGEE TISSUE.**(PATENT ABSORBENT GAUZE AND
COTTON WOOL.)**ABSORBENT
COTTON WOOL.****ROLL BANDAGES.****ROBINSON & SONS,**

COTTON SPINNERS AND MANUFACTURERS OF

SURGEONS' LINTS, COTTON WOOLS,**AND BANDAGES,****WHEAT BRIDGE MILLS,**

NEAR CHESTERFIELD.

Depot:—55 Fann Street, Aldersgate Street, London.



TRADE MARK.

ESTABLISHED 1814.

W. A. SCOTT, 2 HOWARD STREET, SHEFFIELD, MANUFACTURER OF SURGICAL INSTRUMENTS,

Trusses, Elastic Stockings, Knee Caps, Ladies' Belts, Gents' Riding Belts, Magnetic Belts and Appliances, Bandages, Deformity Instruments, Artificial Limbs, Enemas, &c., &c. Trusses from 12/ per dozen; Elastic Stockings, 4/ per pair; Inhaler and Respirator Combined, 24/ per dozen.

N.B.—All our Trusses are hammered to Shape of the Body, and made of Best Sheffield Steel. Samples sent on application. *The Cheapest House in the Trade.***LINDSEY & SON'S
LONDON MADE TRUSSES,**

Wholesale and for Exportation. Illustrated Price List post free.

32 LUDGATE HILL, and 40 GRACECHURCH STREET, E.C.

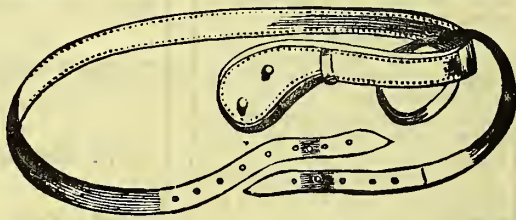
ESTABLISHED 55 YEARS.

USED BY SURGEONS ALL
OVER THE WORLD.THE "LEICESTER"
SPREAD & MARGINAL
PLASTERS,
POROUS PLASTERS,
MUSTARD PLASTER,
CORN PLASTERS,
&c., &c.
BEST QUALITY.**FRANCIS'
BRONCHIAL PROTECTOR.**

REGISTERED TRADE MARK.

Best preventive and cure of Bronchitis, Asthma, Winter Cough, Tight Breathing, and all Throat Complaints. 13/4d. and 2s. 9d.

MANUFACTURED BY

A. de ST. DALMAS, LEICESTER.
Formerly MOOR.**HAYWOOD'S SURGICAL APPLIANCES.****A. Improved Knitted
Chest and Back Protector.****B. Improved Knitted
Chest and Throat Protector.****C. Elastic
Stockings.****D. Trusses.***Greatest attention paid to Special
Orders, which are invariably
forwarded per return of post.***E. Suspensory Bandages.**

List of Prices and Directions for Measurement forwarded on application.

J. H. HAYWOOD, Castle Gate, NOTTINGHAM.

THE LIVERPOOL PATENT LINT CO.

MARK STREET MILLS,
NETHERFIELD ROAD, NORTH,



LIVERPOOL,

MANUFACTURERS OF

PATENT FLAX AND COTTON LINTS OF SUPERIOR QUALITY,
ABSORBENT AND CARDED COTTON WOOL,
ABSORBENT, OPEN WHITE, & GREY, BANDAGES,
SURGEON'S AND STYPTIC TOW.

THE SURGEONS' LINT.

V.B. QUALITY.

The superior quality of NEWSOME'S ABSORBENT SURGEONS' LINT is universally admitted.

The V.B. Quality is quite pure and of great superficial area and exquisite softness.

The C. Quality is equally absorbent and pure, but stronger in fabric.

Newsome's Bleached Rolled Bandages, 3 in., 2½ in., 2 in. Also Surgical Absorbent Open Bandages.

Specially Bleached Grey Carded Cotton Wools, Absorbent and Bleached and Grey Waddings; also Sheet Waddings, Tow, &c.

THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

C. NEWSOME, Spinner and Manufacturer, Jersey Street Mills, Ancoats, **MANCHESTER.**
London Agents: B. PRATT & CO., Wood Street, E.C.

UNIVERSAL

TUBULAR WATER & AIR BED

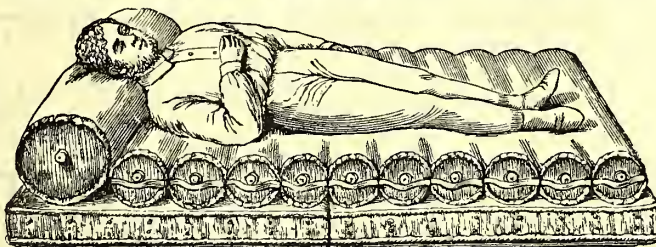
Prize Medals, Sanitary Congress, 1878; Industrial Exhibition, York, 1879; Certificate of Honour, Sanitary Congress, 1879; Brighton, 1881; International, 1881; Kensington, 1882.

POCOCK BROTHERS,

PATENTEES AND SOLE MANUFACTURERS,

235 SOUTHWARK BRIDGE ROAD, LONDON.

Consists of a series of separate and distinct cylinders, any diameter and suitable length, made of Waterproof material either for Water or Air, fitting into a case which keeps them side by side, but slightly apart.



ITS ADVANTAGES
OVER
ORDINARY WATER
OR
AIR BEDS ARE AS
FOLLOWS:—

1. In cost it is less expensive.
2. It is warm and light, and well adapted for a camp or field-bed, being waterproof.
3. It is quickly filled and easily adjusted.
4. It admits of ventilation in the space between the tubes.
5. It can be regulated so as to relieve pressure from any part required.
6. By the addition of tubes it will raise one part of the body higher than the rest.
7. By the temporary removal of one or two tubes it affords room for the introduction of a bed-pan.

8. It can be inclined to any angle (even when filled with water) to suit the condition of the patient.

9. It is free from noise and surging, so disagreeable to the invalid or changing his position on a water-bed.

10. In case of injury to a tube it can be withdrawn, and a fresh one substituted at a trifling cost, and without loss of time; whereas the ordinary water-bed if injured in any part (from being in one compartment) is rendered useless.

11. In the treatment of insane or paralysed invalids who have no control over their evacuations, they cannot lie in a pool of wet, the fluid passing away between the tubes.

TOOGOOD'S

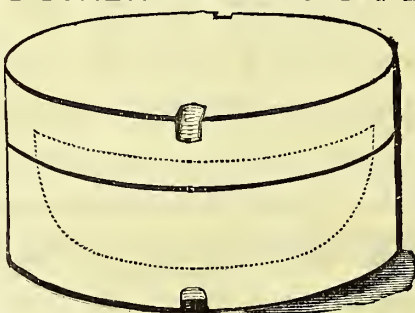
NEW REGISTERED

EARTHENWARE COVERED POTS

ARE CLAIMED TO BE THE MOST PERFECT AND CONVENIENT YET OFFERED TO THE TRADE, AND POSSESS THE FOLLOWING ADVANTAGES:—

1st.—An India-rubber Band passed vertically over the pot is kept in its place by the notches, and effectually secures the lid; for travelling this supplies a want greatly needed.

2nd.—The Covers being made quite flat, labels can be affixed with ease, and without creasing.



3rd.—The Inside of the Pots being rounded or egg-shape, the contents can be entirely removed without waste.

4th.—Great attention has been paid to insure accuracy of contents.

PRICES. { $\frac{1}{8}$ 18/- $\frac{1}{4}$ 18/- $\frac{1}{2}$ 18/- $\frac{3}{4}$ 20/- 1 22/- $1\frac{1}{4}$ 24/- 2 27/- 3 34/- 4 42/- 6 54/- 8 oz. 66/- per Gross.



THE WESTMINSTER FEEDING BOTTLE.

(SCREW GLASS STOPPER.)

THE 1s. WHITE GLASS—

WHITE FITTINGS, 7/6; BLACK FITTINGS, 8/6 DOZ.

THE 6d. GREEN GLASS—

WHITE FITTINGS, 4/; BLACK FITTINGS, 4/9 DOZ.

DR. BELL'S EUCALYPTUS ANTI-CATARRH

OR,

HAY FEVER SMELLING BOTTLE.

RETAIL, 1/1 $\frac{1}{2}$; WHOLESALE, 9/- DOZEN.

MANUFACTURED BY

WILLIAM TOOGOOD,

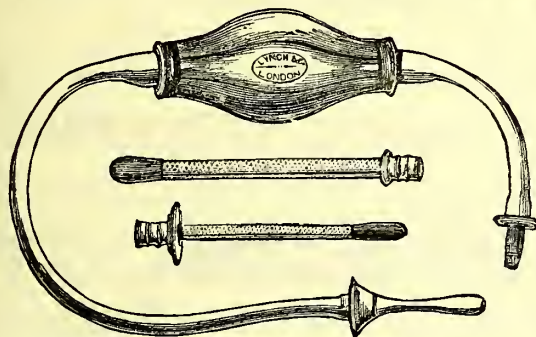
WHOLESALE GLASS BOTTLE MANUFACTURER & DRUGGISTS' SUNDRYMAN
35, 36, & 37 MOUNT STREET, GROSVENOR SQUARE, LONDON, W.

WILLIAM TOOGOOD'S REVISED PRICE CURRENT of Glass Bottles, Measures, Earthenware
Druggists' Sundries, &c., will be forwarded post free upon application.

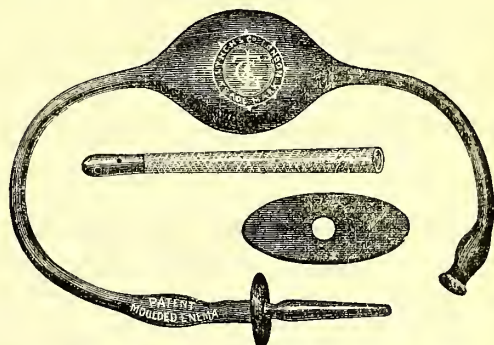
SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.



LYNCH'S



No. 436.



No. 435 D.

ENEMAS.

SUBJOINED ARE PRESENT PRICES:

									£	s.	d.
433A.	HIGGINSON'S, unvarnished india-rubber, with rectum pipe only, in slide cedar boxes	...	...	...	...	...	...	per doz.	1	5	0
433B.	Ditto, with elastic-gum vagina pipe and leather shield	...	...	...	...	...	...	"	1	10	0
434.	Ordinary Higginson's, barrel shape, with bone rectum pipe, elastic gum vagina pipe, to plug on, and patent leather shield, in slide cedar box	...	...	...	...	...	...	per doz.	1	12	0
434AA.	Ditto, fitted with vagina pipe with reversed current	...	...	...	...	...	...	"	1	16	0
434A.	Ditto, ditto, with disconnecting mounts	...	...	...	...	...	...	"	1	14	0
435C.	LYNCH'S (Higginson's principle), black, green, red or white india-rubber, requiring no metal mounts, in one continuous piece, warranted not to split, fitted with vulcanite rectum pipe, in slide cedar box	...	...	...	...	...	...	per doz.	1	10	0
435D.	Ditto, with elastic-gum vagina pipe, and leather shield, in slide cedar box	...	...	...	...	...	...	"	1	15	0
436.	LYNCH'S FAMILY (Higginson's principle), fitted with bone bulb pointed rectum pipe for adults, elastic-gum vagina pipe, and elastic-gum rectum pipe with bone shield for children, in mahogany box	...	...	...	...	...	...	per doz.	2	8	0
437.	Ditto, in slide cedar box	...	...	...	...	...	...	"	2	2	0
437A.	LYNCH'S PERFECTION, in mahogany box	...	...	...	...	...	...	"	2	16	0
437B.	Ditto, in slide cedar box	...	...	...	...	...	...	"	2	10	0
437C.	Ditto, in superior mahogany box, with lock and key	...	...	...	...	...	...	"	3	12	0
437D.	Ditto, in oval boxes of cloth and leather	...	...	...	...	...	...	"	2	15	0
437E.	LYNCH'S COMPLETE HOUSEHOLD SYRINGE, consisting of Higginson's Enema with disconnecting mounts, fitted with bone bulb-pointed rectum pipe for adults, elastic-gum rectum pipe with bone shield for children, elastic-gum vagina pipe, and bone pipes for ear, eyes, and nose, in mahogany box	...	...	...	...	...	...	each	0	7	6

Discount—10 per cent. Monthly, 5 per cent. Half-yearly Account.

SPECIAL QUOTATIONS FOR 12 DOZEN AND UPWARDS.

LYNCH & CO.,

Wholesale and Export Chemists and Druggists' Sundriesmen,
Surgical Instrument Makers,

DEALERS IN PATENT MEDICINES, PERFUMERY, AND PROPRIETARY ARTICLES,

ALDERSGATE STREET, LONDON, E.C.

Australian Branch—15 Vaughan's Chambers, 48 Queen Street, Melbourne.

SOLE AGENT, MR. RIVERS LANGTON.

LIVERPOOL.

CLAY, DOD & CO.,

WHOLESALE & EXPORT



LIVERPOOL.

DRUGGISTS

AND

MANUFACTURING CHEMISTS.

Manufacturers of all descriptions of PHARMACEUTICAL PREPARATIONS.

IMPORTERS OF ESSENTIAL OILS.

Offices—52 St. Anne Street; Mills & Laboratory—Wakefield St., LIVERPOOL.

PRICE LISTS AND QUOTATIONS ON APPLICATION.

Estab. 1832. **TRUSSES.** Estab. 1832.

The BEST and CHEAPEST LONDON-MADE TRUSSES in the Market are Manufactured by

H. M. COLWELL.

ELASTIC STOCKINGS, SUSPENDERS, & SURGICAL BANDAGES OF ALL KINDS.
WHOLESALE AND EXPORT.

The largest Shipper in the Trade.

Illustrated Price List on Application.

MANUFACTORY: 116 NEWINGTON CAUSEWAY, LONDON, S.E.

E. BENTLEY & SONS' NEW OPAL GLASS POTS,

FOR DISPENSING TOOTH PASTE, COLD CREAM, & OTHER PURPOSES.

PRICES:—

Lip Salves	$\frac{1}{4}$ oz.	$\frac{1}{2}$ oz.	$\frac{3}{4}$ oz.	1 oz.	$1\frac{1}{2}$ oz.	2 oz.	3 oz.	4 oz.
	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{1}$	$\frac{2}{8}$	$\frac{3}{4}$ per doz.

E. BENTLEY & SONS, DRUGGISTS' SUNDRYMEN,

Manufacturers of Ship and Family Medicine Chests of every description.

All kinds of Bottles for Chemists' and Perfumers' use kept in stock or made to order.

14 TABERNACLE ST., & 1 & 2 HILL ST., FINSBURY, LONDON, E.C.

GREAT REDUCTION IN PRICE OF GLASS BOTTLES, SYPHONS, ETC.

ESTABLISHED TWENTY-FIVE YEARS.

ROUND SHOULDER OR LIME JUICE BOTTLES

$\frac{1}{2}$	1	2	3	4	6	8	10	12	16	20	oz.
2/9	3/3	4/6	6/	6/6	7/6	8/6	14/	15/	20/	22/	per gross

VIALS (Long, Medium, or Short Series).

oz., 2/8; 1 oz., 3/; 2 oz., 4/6 gross. Good quality.

KALI (CONFECTIONER'S) BOTTLES.

$\frac{1}{4}$	6	8	10	12	20	oz.
4/	7/6	9/	14/	17/	24/	gross,

GLASS SYRINGES (Best Quality).

 $\frac{1}{4}$ oz., 14/; $\frac{1}{2}$ oz., 18/; 1 oz., 27/; 2 oz., 49/ gross.

All and every kind of Bottle made, and prices given for any particular pattern.

FEEDING BOTTLES:

Best White Glass, China Tops, White Indiarubber Fittings, 27/ gross; Black ditto, 34/ gross.

Curved, with Screw Caps, White Indiarubber Fittings, 36/ gross; Black Indiarubber Fittings, 42/ gross.

N.B.—The fittings for above Screw Feeders are made in Glass (no Metal or Earthenware).

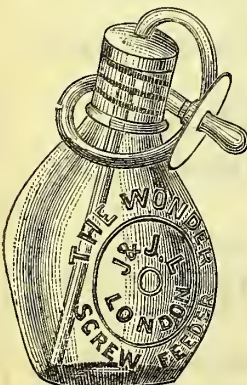
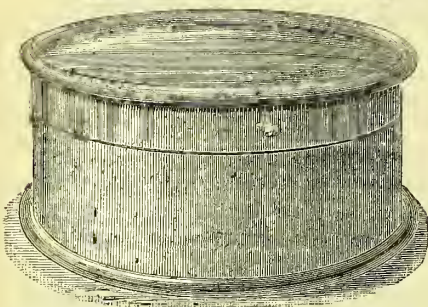
SYPHONS: Block Tin Mounts, best in the trade, 19/ doz. f.o.b. Antwerp.

SELTZOGENES: 5 pint, 14/ each

J. & J. LANG, Glass Works, Alsace and Lorraine.

37 Quai Flamand, ANTWERP; and 28 Rue Notre Dame de Nazareth, PARIS.

SHOWROOMS AT 82 HATTON GARDEN, LONDON, E.C.



BEST WHITE FLINT OVAL DISPENSING OR PERFUMERY BOTTLES.

2	3	4	6	8	oz.
6/	7/	8/6	9/6	16/6	per gross.

BEST WHITE FLATS.

2	3	4	6	8	oz.
6/	7/	8/6	9/6	16/6	per gross.

PILL BOTTLES (Metal Screw Caps).

 $\frac{1}{2}$ oz., 9/; 1 oz., 10/; 2 oz., 13/; 3 oz., 16/ gross.

POMADE BOTTLES (Metal Screw Caps).

1 oz., 11/; 2 oz., 14/6; 3 oz., 18/; 4 oz., 21/ gross.

Our Metallic Capsules are superior to anything in the Market.

Syphons,
19/ per doz.
f.o.b.
Antwerp.

POWELL & BARSTOW, 5 Albion Place, Blackfriars Bridge, S.E.

LATE

W. HURLSTONE & CO.,

BLACKFRIARS ROAD & VINE ST., S.E., Established 1830,

Manufacturers (to the Wholesale Trade) of

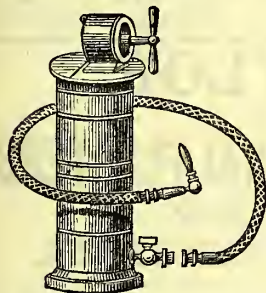
ELASTIC GUM SURGICAL INSTRUMENTS.**WORKS: LAMBETH.**

ESTABLISHED 1842.

TOLLAY, MARTIN & LEBLANC.

7 RUE CADET, PARIS,

Makers of DR. EGUISIER'S

**IRRIGATOR**

For Enemas, Injections, Irrigators Ascendant, Douches, enabling sick persons to use in bed, without changing their places, or putting themselves to any other inconvenience.

Sole Agent, G. V. DE LUCA, 6 and 7 Long Lane, London, E.C.

ADDRESSED TO CHEMISTS AND DRUGGISTS. AGENTS WANTED.

**DR. HENRY A. MARTIN'S
PURE RUBBER BANDAGES (GENUINE),***For the Radical Cure of Varicose Veins, Weakness, Ulcers, Eczema, and other Diseases of the Leg, and for Injuries of the Knee and Ankle Joints.*

By far superior to any of the numerous imitations; are now being sold at less cost than those of other manufacturers.

TESTIMONIAL:

To MESSRS. KROHNE & SESEMANN.

GENTLEMEN,—I have the greatest pleasure in acceding to your request, that I should, from my experience of the Martin's Bandages, testify respecting their excellence.

My knowledge of the quality of Bandages of English make is limited: for having, about fifteen months back, applied bandages sent to me from this source, and noting the evident irritation and discomfort produced by them—so great, indeed, that each patient soon discontinued their application—I ceased to recommend and use them.

In April of this year, I for the first time used the original Martin's Bandage, and since then I have applied them and none else to the limbs of nearly twenty persons suffering from a variety of complaints, such as ulcers of the leg of old standing, which had resisted all treatment for more than fifteen years; varicosities (the unsound leg of one patient, a man, measured 25 inches round the calf, against 16½ inches, the size of the sound leg; and his condition was such that, before coming under my care, it had been by his former attendant seriously debated whether or not the leg should be amputated to save life. This man goes about wearing a 21-foot Bandage, and the calf of the unsound leg now measures 18 inches); erysipelas, oedema, rachitis, &c.

Suffice it that all, both young and old, have been enabled to wear them with comfort; most of the cases under treatment have been cured, all benefited, and many, although well, continue to wear them on account of their safety and the support they give rise to.

I may appear to have said too much in their favour. I can assure you that my feeling is that I have said too little. The great success attending their use evidently arises from the excellent purity, smoothness, impermeability, and non-irritating nature of the India-rubber of which each Bandage is composed.

CAUTION TO THE TRADE.—The Sole Agents for the Genuine Martin's Bandages request the Trade to compare their Prices with those commonly charged for worthless imitations, which are advertised as "Recommended by Dr. Martin," or as "Suggested by Dr. Martin," which is misleading, the vendr rs having not the shadow of a title to use Dr. Martin's name in connection with their bandages. Each GENUINE BANDAGE stamped with Dr. H. A. Martin's signature is warranted to be perfect in every respect, and to wear well.**For the Leg, from the Foot to below Knee**—No. 1, thick, 7/3; No. 1A, medium, 6/; No. 1B, thin, 4/3.**For the Leg from the Foot to Groin.**—No. 2, thick, 16/6; No. 2A, medium, 13/; No. 2B, thin, 10/.**For the Knee-joint and Thigh.**—No. 3, extra thick, 5/; No. 3A, extra thick, 7/9; No. 3B, medium, 7/6.**For the Ankle, Wrist, and Forearm.**—No. 3, thick, 3/6; No. 3A, thin, 2/9.**PRICES SUBJECT TO 20 PER CENT. DISCOUNT.**

Special Terms for Export to Shippers and Colonial Agents.

For other sizes see complete Price List; also Dr. H. A. Martin's Pamphlet, describing Method of Treatment, which are sent Post Free on application to the Sole Wholesale Agents for Europe, Asia, Africa, and Australia,

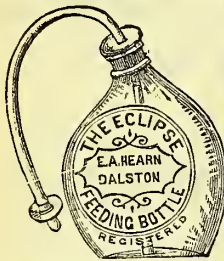
KROHNE & SESEMANN, SURGICAL INSTRUMENT MAKERS,**8 & 38, DUKE STREET, MANCHESTER SQUARE, LONDON.**

Also Sole Agents for the Sale of Dr. H. A. Martin's Adhesive Plaster. Agents for the International Society for the Manufacture of Wound Dressing Materials (Limited), Schaffhausen. Patentees of Dr. Siegle's Steam Spray Inhaler, the New Pliable Metal Temperature Regulators, and Dr. Paquelin's Thermo Cautere, &c.

Feeding Bottles.

THE "ECLIPSE."

Fitted with Boxwood or China topped Corks.



White Fittings, 30s. per best Black Fittings, per gross.

Fitted with best Screw Glass Stoppers, 6s. per gross extra. The above are put up in one dozen wood-partitioned boxes.

Spare Bottles or Fittings at lowest prices. Liberal discount to large buyers.

HEARN, RIDDELL & CO., GLASS BOTTLE MANUFACTURERS, 381 KINGSLAND ROAD, LONDON, E.

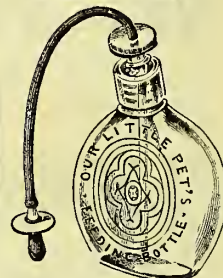
GLASS BOTTLES of EVERY DESCRIPTION, either PLAIN or STOPPERED, made in WHITE, BLUE, AMBER, ACTINIC GREEN, or any other colour required.

SCREW NICKEL CAPPED POMADES, HONEY POTS, JELLY JARS, &c., &c.

SPECIAL ATTENTION GIVEN TO QUALITY.

*Quotations Post Free to any part of the world on Application.*The above will be found the **BEST and CHEAPEST** House in the Trade.**"OUR LITTLE PETS"
Feeding Bottle.**

Fitted with best Porcelain Caps or Screw Glass Stoppers.



White Fittings, 78s. per gross; Black Fittings, 84s. per gross.

Each Bottle, with two Brushes, in handsome cardboard box, bearing our Copyright Label.

Spare Bottles or Fittings at lowest prices. Liberal discount to large buyers.

BELLADONNA POROUS PLASTERS.

24s. per gross.

SUBJECT.

Samples on Application.

EDWARD TAYLOR, MANUFACTURER OF ALL KINDS OF MEDICAL, SURGICAL & MARGINAL PLASTERS

For Home Trade and Export to all climates.
ISLINGTON SQUARE, SALFORD, MANCHESTER.

[ESTABLISHED 1847.]

Samples and Quotations on Application.

FRENCH SCREW GLASS POTS & BOTTLES, WITH METALLIC NICKELLED CAPSULES.

The above new method (first introduced by G. V. De Luca) excels all others for neatness and elegance, and is specially adapted for export. Made in various new designs. Spécialité for Bottles for all kinds of Confectionery, Essences Manufacturers and Sundries. N.B.—Beware of imitations sold at cheap prices, the capsules being a mixture of lead or tinned iron.

Manufacturer of the GLASS POMADE POTS WITH GLASS COVERS, in Opal White and White Flint in all sizes.

G. V. DE LUCA, French Flint Glass Manufacturer, 6 and 7 Long Lane, LONDON, E.C.

WHOLESALE AND EXPORT AGENTS—S. MAW, SON & THOMPSON, 7 to 12 ALDERSGATE STREET, LONDON, E.C.

Illustrated Catalogue for Patent Screw Capsule on application.

REGISTERED TRADE MARK,

THE PROPRIETORS OF THE "W" BRAND DISPENSING BOTTLES

Beg to call the attention of their numerous supporters to their correct



TRADE MARK.

as they learn with regret that inferior bottles have been shipped with a Mark imitating theirs. The Proprietors continue to supply their bottles only through the best London Wholesale Houses, as heretofore, and give notice that they will take action against makers using a colourable imitation of their Trade Mark.

SHOP BOTTLES & JARS WITH VITRIFIED (burnt in) LABELS

(Black letters on a ground of pink or white enamel).

Narrow-mouthed and Wide-mouthed Bottles, well stoppered; Capped and Tube-stoppered Oil Bottles; Syrup Bottles, with Plug Stoppers of Dark Blue or White Opaque Glass; Lozenge Jars with Cut Glass Knobs; Cut Perfume Bottles, Round, Oval, and Square; Shop Jars of Best Porcelain, thoroughly Greaseproof. Labels Indestructible and of elegant Appearance, forming an even surface with the Glass or Porcelain. PRICE LIST on APPLICATION. A Large Variety of Samples on Show at

H. POTHS & CO.,

4 SUGARLOAF COURT, 50 LEADENHALL STREET, LONDON, E.C.



Amongst others the following have been supplied with these Bottles and Jars:—Bathe, F. G., Chiswick; Bradford & Co., Bridlington Quay; Birks, N. & W. H., Adelaide, S.A.; Breary, W. A., & Son, Douglas, Isle of Man; Brown, Alex., Dunoon, N.B.; Chandler, J. W., & Co., Bridgetown, Barbados; Corry, T. C. S., Dr., Belfast; Cottingham, W., Lincoln; Croymen, E. H., Newcastle-under-Lyme; Davis, Hayton, High Harrogate; Dore, van, Richard, Blackrock, near Dublin; Durrant, G. R., Hertford; Hall, Ralph, 552 Kingsland Road, London, N.; Hill, J. B., Auckland, N.Z.; James, J., 170 New Cross Road, Camberwell; Jones & Co., Christchurch, N.Z.; Lofthouse, J., Fleetwood; Morris, Banks & Co., Birmingham; Ockenden, J., Moorfields; Philip, J., 2 Market Place, South Fulham; Roberts, D. P., Croydon, Surrey; Robinson, C. J., Streatham, London; Taylor, P. N., 14 Basinghall St., London, E.C.; Tremmer, J. J., Barnstable; Waterall, Geo., & Sons, Nottingham; Wilson & Sons, Harrogate.

DEPOT OF THE PATENT SAFETY SAMPLE AND PARCELS POST BOX CO., LIMITED.

Obtained Highest Award, Calcutta Exhibition, 1884.



BREFFIT'S



(LIMITED)

AIRE & CALDER BOTTLE CO.

GLASS BOTTLES.

GLASSWARE SUNDRIES.

DISPENSING BOTTLES.

NEW SERIES—FLATS AND SQUARES.

SCREW STOPPERED BOTTLES

IN GREAT VARIETY.

OUR

PATENT AERATED WATER BOTTLES

OF IMPROVED MAKE AND FINISH, WITH BEST QUALITY STOPPERS AND RUBBERS, ARE NOW IN GENERAL USE.

SCREW NICKEL CAPPED POMADES,

IN WHITE GLASS, ALSO IN WHITE AND BLUE OPAL.

THE REGISTERED

"INTERNATIONAL" FEEDING BOTTLES

FITTED WITH SCREW GLASS STOPPERS.

PERFUMERY BOTTLES.

SEVERAL NOVEL AND ATTRACTIVE PATTERNS ADDED THIS MONTH.

SAMPLES, PRICES, ETC., UPON APPLICATION.

OFFICES AND EXTENSIVE SHOW ROOMS—

83 UPPER THAMES ST., LONDON.

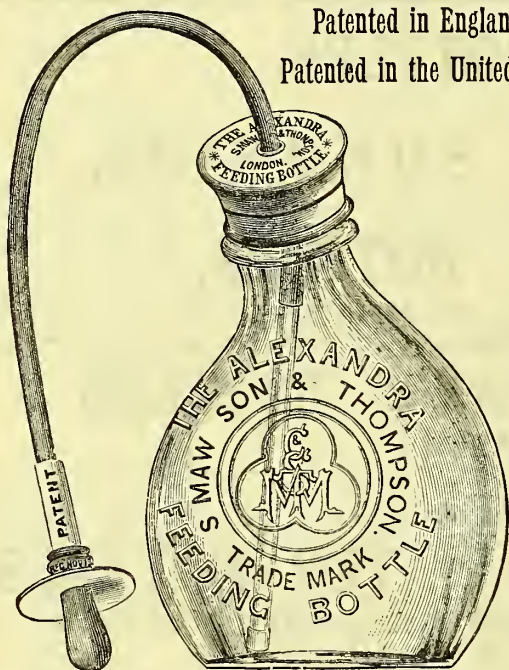
(Close to Cannon Street and Mansion House Railway Station.)

Our Award at Philadelphia International Exhibition was for "Good quality and suitability to purposes."

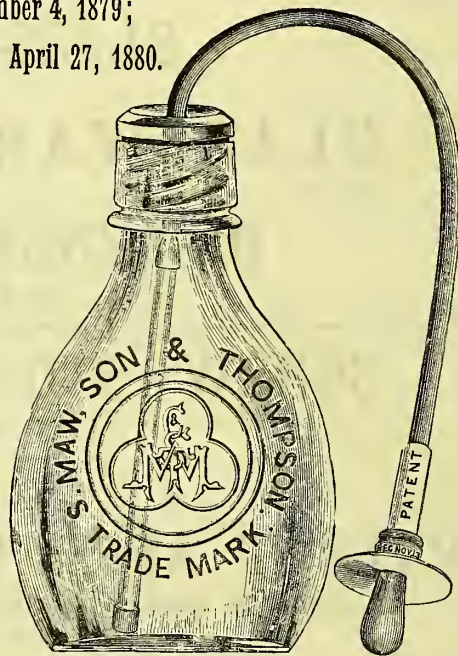
S. MAW, SON & THOMPSON'S FEEDING BOTTLES.

Patented in England, December 4, 1879;

Patented in the United States, April 27, 1880.



THE ALEXANDRA.
(Earthenware Cap.)



THE EXPORT.
(Glass Screw Stopper.)

	White Fittings.			Black Fittings.		
Alexandra, Earthenware Caps..... per doz.	—	7/6	11/-	—	8/6	12/-
Alexandra, Earthenware Screw Stoppers „	—	—	11/-	—	—	12/-
Alexandra, Glass Screw Stoppers „	4/-	7/6	11/-	4/9	8/6	12/-
Export, China or Wood Top Corks „	3/4	—	—	4/-	—	—
Export, 2nd Quality, Wood Top Corks „	2/9	—	—	3/6	—	—
Export, Earthenware Caps „	—	7/3	—	—	8/3	—
Export, Glass Screw Stoppers „	4/-	7/6	—	4/9	8/6	—

FOR FURTHER PARTICULARS SEE QUARTERLY PRICE CURRENT, PAGES 69 AND 70.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.

PRIZE MEDALS, INTERNATIONAL EXHIBITIONS.



LONDON, 1862.



PARIS, 1875.



PHILADELPHIA, 1876.



PARIS, 1878.



SYDNEY, 1879.



MELBOURNE, 1880.

KILNER BROTHERS,

MANUFACTURERS OF

<p>MINERAL WATER</p> <p>Chem- should hand a "OUR FEEDING</p> <p>One of the best selling Various Styles Green and White Glass, with</p>	<p>D I S P E</p>	<p>BOTTLES.</p> <p>ists keep on stock of "BABIES" BOTTLES.</p> <p>articles in the Market. and Prices. White, Brown, and Black Fittings.</p>
<p>F E E D I N G</p>		
<p>CHEMISTS</p> <p>We supply GLASS BOTTLES for attention to our extensive fumery, and similar de- White Flint in all</p> <p>A large stock of WOOD BOXES</p> <p>Illustrated Cata- Lists for- appli-</p>	<p>N S I N G</p>	<p>BOTTLES.</p> <p>all purposes, and invite special variety for Dispensing, Per- partments. Green and shapes and sizes.</p> <p>ESTES' TURNED to choose from.</p> <p>logues and Price warded upon cation.</p>

KILNER BROTHERS,

No. 3 GT. NORTHERN GOODS STATION, KING'S CROSS, LONDON.

NEWTON, CHAMBERS & CO., LIMITED,

Are Manufacturers, by Davis' Patented Process, of

PURE BENZENE

(Benzene purissimum crystallizatum),

COMMERCIAL BENZOLS,

SOLVENT and VARNISH NAPHTHAS.

NAPHTHALENE,

CARBOLIC DISINFECTING POWDER.

No. 1 CARBOLIC.

An extra refined quality, made with great care in the laboratory in glass vessels, for internal medical administration.

In one-ounce bottles only.

No. 2 CARBOLIC.

A pure crystallized acid, especially prepared for external medical application.

In ten-ounce bottles only.

No. 3. CARBOLIC.

A fluid mixture of carbolic and cresylic acids, quite free from tar oils and sulphuretted hydrogen, specially prepared for internal household disinfection.

No. 4 CARBOLIC.

A brown acid, free from tar oils and sulphuretted hydrogen, for outdoor disinfection, drains, middens, cesspools, farm premises, &c., &c.

ADDRESS—

THORNCLIFFE, NEAR SHEFFIELD.

TRADE LIST ON APPLICATION.

✱

BURROUGH'S
Cale St.
Distillery

**Best
Methylated
Spirits**

CHESEA,
S.W.

AT LOWEST PRICES.

BURROUGH'S
SPIRITUS RECTIFICATUS P.B.

**SPIRITS
OF WINE**

5 gns. 19/4 cash.

THE BEST ENGLISH GRAIN SPIRIT
FREE FROM FUSEL OIL. CHEMICALLY PURE

Special Quotation for Quantity.

✱

JAMES BURROUGH,
LONDON, S.W.

METHYLATED SPIRIT & FINISH

Supplied of the best quality in wholesale quantities by

J. & W. HARVEY & CO., Distillers, Yoker, GLASGOW.

LONDON AGENTS—JAMES CHAMBERS & CO., 23 BIRCHIN LANE, CORNHILL, E.C.

JONES & MASON,

METHYLATED SPIRIT MAKERS.

Regent Wharf, Copperfield Road, Mile End, London, E.

FROM RATCLIFF.

SAMPLES AND PRICES UPON APPLICATION.

S.V.R.

Guaranteed pure, thoroughly rectified, and made from English Grain Spirits.

60 o.p., 20s. 9d. per Gal.

56 o.p., 20s. 3d. „

TINCTURE SPIRIT.

Useful for all purposes where absolute purity is not necessary.

60 o.p., 20s. 6d. per Gal.

56 o.p., 20s. 0d. „

1s. per gallon discount for Cash with order.
Further allowance for quantity.

STEAM STILL ONLY.**GEORGE PHILLIPS & CO.,**

ST. ANDREW'S DISTILLERY,
Clerkenwell Road, LONDON, E.C.

**ROSE, DOWNS & THOMPSON,
HULL,**

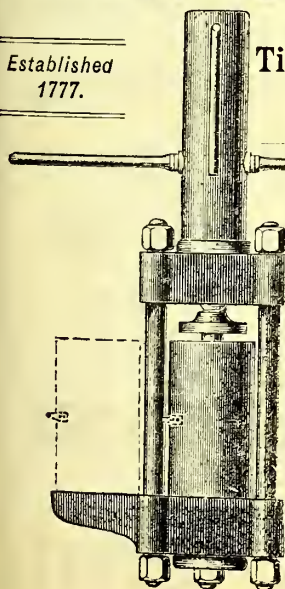
OIL MILLS OF ALL KINDS,
Sole Makers of THOMPSON'S

PATENT SCREW PRESS

FOR

Tinctures, Essences,
Oils, etc.

Established
1777.



This Press embodies many important improvements, and we can offer it with confidence as the best Hand Press hitherto made. Amongst other advantages it possesses the following:—

One man can exert a pressure of 30 tons on a box 9 inches diameter, or on a cake 12 in. by 8 in., or two men on a box 13 inches diameter, or on a cake 17 in. by 11 in.

The lever arm is always the same height from the ground, thus enabling the full power of a man to be used at the most advantageous level.

The Screw is of coarse pitch, and thus has little liability to strip or wear. The Screw is protected from injury. The construction is very simple.

Patent Rolls for Linseed,
Edgestones for Drug Grinding.

CIRCULARS GRATIS.

ANILINE DYES

TO SUIT ALL TRADES.

**BEST SPIRIT BLACK
IN THE MARKET.**

Mahogany Stain
Ebony Stain
Oak Stain
Walnut-
Stain

PRONK, DAVIS & CO.,
41 Great Tower Street, LONDON, E.C.

COLORS.

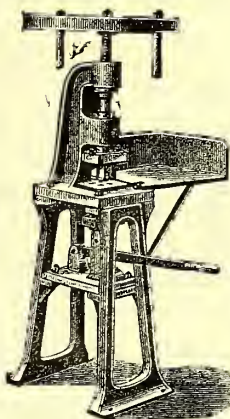
CHEMICALS.

INDIGO PASTE.

CUDBEAR.

DYEWOOD EXTRACTS.

Bronze Powders & Metal Leaf.

**HAND & STEAM POWER
PRESSES**

For making into Blocks,
Tablets, or Pellets, Drugs,
Blue, Blacklead, and other
Powders.

R. M. COLLINGHAM,

ENGINEER,

Green Lane Foundry, Hull.

Starching made easy and pleasant.

Prevents the iron sticking
to the linen.



Suitable for hot or cold
water starch.

Sold in 1d., 3d., 6d., and 1s. Packets, and in Large Boxes, for
Hotels, Laundries, &c., 5s., 10s., and 20s. each.

Wholesale by Maw & Sons, Evans, Sons & Co., Southall
Bros. & Barclay, Wyleys & Co., &c.

THE CELEBRATED DANGERFIELD'S IGNITING MATCH CASE.

PRONOUNCED PERFECTION.

It has no equal in Mechanical Construction, Workmanship, Quality of Material, Neatness, Compactness, Convenience, and Low Price. Secured by United States and Foreign Patents. Prices the world over:—XX Tin, 1/ each, 7/6 per doz.; Solid Nickel Silver, 2/ each, 11/6 per doz.; Solid Nickel Silver, with Clipper, 2/ each, 14/6 per doz. Sent post free to any part of the world on receipt of price (P.O.O.).

FRANCIS S. DANGERFIELD,

Proprietor and Sole Manufacturer, AUBURN, N.Y., U.S.A.
C. BRANDON & CO., 16 Red Lion Square, London, Sole Agents for Great Britain and Ireland.

FOR CLEANING PLATE.**BRADLEY & BOURDAS'S
ALBATUM or WHITE ROUGE,**

For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 6 Pont Street, Belgrave Square, and 48 Belgrave Road, London, S.W.

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.**JOHN OAKLEY & SONS,**

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Emery Wheels, Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

OAKLEY'S WELLINGTON KNIFE POLISH,

Prepared expressly for Oakley's Patent India-Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Packets, 8d. each; and Tins, with perforated Tops to prevent waste, 6d., 1s., 2s. 6d., and 4s. each.

OAKLEY'S NON-MERCURIAL SILVERSMITH'S SOAP,

For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKLEY'S POLISHING PASTE,

For Cleaning Brass, Copper, Tin, Pewter, &c., &c. Tins, 1d., 2d.; Pots, 6d. and 1s. each.

WELLINGTON BLOCK BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.

Highest Award and Prize Medal, Philadelphia Exhibition, 1876; and Boston, 1883. Gold Medal, Crystal Palace, 1884.

"LA BRILLANTINE"

(REGISTERED).

SOLD IN 6d. AND 1s. BOXES.

METALLIC POWDER

Is the best, cheapest, and most effective Powder for cleaning and polishing Metals and Glass (especially Brass). It is used by the Life, Horse, and Dragoon Guards, the Fire Brigades, &c., &c.

PROPRIETORS—

J. F. BAUMGARTNER & CO.

22½ NEWMAN STREET, OXFORD STREET,
LONDON, W.

The Leading Article for Waterproofing, Softening, and Preserving **BOOTS, LEGGINGS, HARNESS, MACHINE BELTING, FIRE HOSE, &c.**

THREE
GOLD

MEDALS.

DALES' GOLD MEDAL PORPOISE OIL DUBBIN

Does not prevent the boots blacking. Free from unpleasant odour. Makes leather goods wear three times longer than ordinarily. Sells well and pleases the buyer. Put up in superior style in tins, 2d., 6d., 1s., and 2s. 6d. (no retail price on tins and special tins for export). Show Cards, Transparencies, &c., supplied; also Handsome Show Cases for first orders for 50s. For further particulars see page 64 in 1885 Diary.

JOHN T. DALE, 287 Crystal Palace Road, LONDON, S.E.

Avoid Imitations under Various Names—Use only the Standard and Original Article.

HAUTHAWAY'S PEERLESS GLOSS,

A NECESSITY in every Family. It BLACKS and POLISHES Ladies' and Children's Boots without Brushing, being supplied with a Sponge attached to the Cork for instant use.

JOHN S. DEED & SONS, NEW OXFORD STREET, LONDON,

SOLE WHOLESALE AGENTS FOR THE UNITED KINGDOM.

CRETA PREP.
BOLE, ARMENIA
FERRI, RUBIGO
" SUB. CARB.
CHARCOAL PRECIP.
PUMICE
JEWELLERS' ROUGE
&c., &c.

COLOURS.

STATON & COOPER,ESTAB.
1796.]Challinor's Colour Works, City Road, DERBY, [ESTAB.
1796.]**WHOLESALE DRUG LEVIGATORS**

Manufacturers of Paints, Colours, and Varnishes.

SAMPLES & QUOTATIONS ON APPLICATION.

COLCOTHAR
LAPIS, CALIM.
PLATE POWDER
FULLER'S EARTH
ROTTEN STONE
CROCUS
CORNU GERVI
&c., &c.

PAINTS

AXLE GREASE

IN 1½ LBS. WOODEN BOXES.

Send for Sample Box and Price, free on application.

JOHN ROGERS, 79 VICTORIA STREET, BELFAST.

IMPROVED AND LATEST MACHINERY

PARIS, 1878.

FOR

VIENNA, 1873.



DRUG GRINDERS,

WHOLESALE

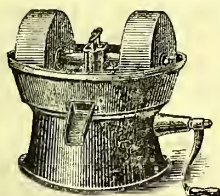
CHEMISTS & DRUGGISTS,



PAINT AND COLOUR MANUFACTURERS, AND OTHERS.

HAND EDGE RUNNER MILL.

With Iron or Granite Rollers and Bed.

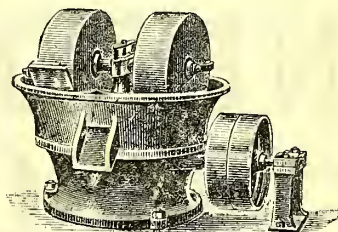


HAND MIXING AND CRUSHING PAN MILL.

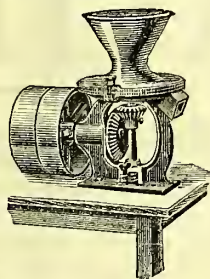
For Ointments,
Pastes,Powders,
&c., &c.

POWER EDGE RUNNER MILL.

With Iron or Granite Rollers and Bed.

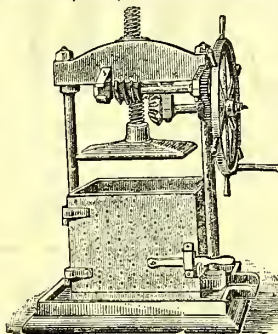


NEW DRUG MILL.

For Ginger, Roots, and all kinds of friable
materials.

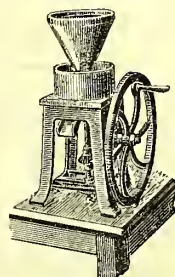
COMPOUND PRESS.

For Tinctures, &c. (made in Wood and Iron).

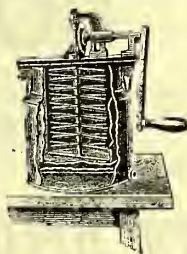


HORIZONTAL MILL.

For Dry Powders.

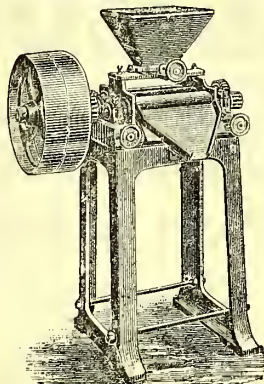


NEW HORIZONTAL MIXER,

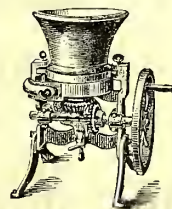
For Amalgamating Compounds, &c. (made with
or without casing).

NEW GRINDING MILL

For Pastes, Colours, and Inks.



IMPROVED PAINT MILL.

For Mixing and Grinding Colours in Water or
Oil ready for use.

MACHINES FOR SPECIAL PURPOSES, EVAPORATING PANS, &c., MADE TO ORDER.

Prices and particulars on application to

FOLLOWS & BATE, LIMITED, Engineers,

DUTTON STREET WORKS, MANCHESTER.

PITCH,

OILS, TALLOW, &c.

J. R. PEACE & CO.,

26 ALEXANDRA BUILDINGS,
Etabd.] 41 Ormond Street, Liverpool, [1867.
IMPORTERS OF AND MERCHANTS IN ALL KINDS OF PITCH, OILS, &c.
Hard and Soft Stearine Pitch Palm Oil Pitch Brimstone, Ashes, &c.
Cotton Seed and Patent " Hot Neck Grease Roll and Flour Sulphur
Brown, Vegetable. & Wood " Turpentine & Rosin Tallow, Cylinder Oils, &
S ockholm and Archangel " Soft Soap, Glues, &c. General Produce.
SAMPLES AND LOWEST PRICES ON APPLICATION.

GENUINE OIL OF MUSTARD SEED

Is strongly recommended as a safe and effectual remedy in cases of Rheumatism, Gout, Rheumatic Gout, Sciatica, Lumbago, Headache, Pains in the Stomach, Spasms, Bruises, Chilblains, &c. *Retail in Bottles, 1s. each.*

Imported by J. H. & S. JOHNSON, Wholesale Druggists,
6, 8, & 10 WHITECHAPEL, AND 7 CHURCH STREET, LIVERPOOL.

NEEDHAM'S

Gold Medal, Adelaide, 1881.
Order of Merit, Melbourne, 1880.
Diploma of Merit, Vienna, 1873.

Established over Half a Century.

For Cleaning and
Polishing Brass, Copper,
Tin, Britannia Metal,
&c., &c.

POLISHING



Pickering's Furniture Polish, Plate Powder, Knife Powder,
Brunswick Black, Razor Paste, Harness Blacking,
Polishing Pomade (red) for Metals, &c.

JOSEPH PICKERING & SONS, SHEFFIELD.

PASTE.

PLASTERS.

JOHN QUILLIAM & CO.

11 SUGAR LANE, MANCHESTER,
MANUFACTURERS OF ALL KINDS OF

SURGICAL & MARGINAL PLASTERS

CORN & BUNION PLASTERS,

COURT PLASTER, &c.

Samples and Quotations on application. [1]

W. EDWARDS & SON,

157 QUEEN VICTORIA STREET, LONDON,

WHOLESALE AND EXPORT DEALERS IN

Patent Medicines and Proprietary Articles,

ENGLISH, AMERICAN, FRENCH, &c.

SOLE AGENTS for ROCHE'S HERBAL EMBROCATION,

Burchell's Anodyne Necklaces, Ford's Balsam of Horehound, Widow Welch's Pills, by Mrs. Smithers, Oxley's Essence Ginger, and the preparations of Messrs. Hudson & Son, late of the Haymarket, London.

PRICE LISTS SENT ON APPLICATION. ORDERS CAREFULLY AND PROMPTLY EXECUTED.

**IMPORTANT REDUCTION in the WHOLESALE PRICE of LAMPS,
FROM OCTOBER 1, 1884.**

SAMUEL CLARKE'S PATENT PYRAMID NURSERY LAMP FOOD WARMERS

MOSCOW EXHIBITION, 1872,



1st Award, First Grand Silver Medal to Samuel Clarke, London, for his Patent Pyramid Night Lamp Food Warmer.

2nd Award, First Grand Silver Medal to Samuel Clarke, London, for his Patent Pyramid Night Lights.



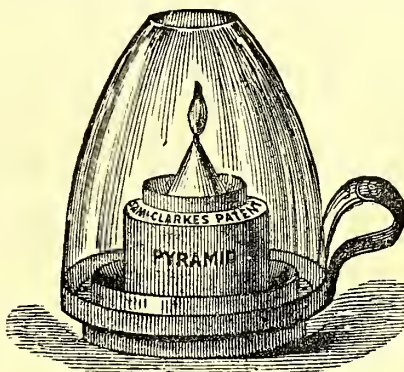
PRIZE MEDAL AWARDED, LONDON, 1873.

PRIZE MEDAL AWARDED, PARIS EXPOSITION, 1887.

SILVER MEDAL AWARDED AT THE HEALTH EXHIBITION, SOUTH KENSINGTON, 1884.



**Patent Pyramid
NIGHT LAMPS.
THE BURGLAR'S HORROR!!**



**GOLD MEDAL,
World's Exposition, New Orleans.**

- No. 1 Holds Half a Pint of Food, besides Water.
No. 2 Holds Three-quarters of a Pint Food, besides Water.
No. 3 Holds One Pint Food, besides Water.

Clarke's Hot-water Lamps.

" Pyramid Night Lamps, Lacquered or Bronzed.

" " " Lights.

EXTRAS.—Porcelain Panakins, Lids, Tin Panakins, Clear Glasses, Roughed ditto, Opaline ditto.

For Terms and Prices apply to the Patentee—

PATENT "PYRAMID" NIGHT LIGHT WORKS,

CHILD'S HILL, LONDON, N.W.

AMERICAN DEPOT: 25 & 27 EXCHANGE ALLEY, NEWARK, NEW JERSEY, U.S.A.



ADDRESS CARDS.



SAM^L LAMBERT & CO.,
DRUG, OIL, AND CHEMICAL BROKERS,
132 Fenchurch Street, London, E.C.

AGENTS FOR
Fratelli de Pasquale & Co., Messina. Fridr. Jobst, Stuttgart.
I. Bernhardt, Leipzig.

FRED^K FINK & CO.,

10 & 11 MINCING LANE, LONDON, E.C.

SPECIALITIES: Glycerine—Gum Arabic—Gum
Tragacanth—Pure Beeswax—Honey—Quinine.

R. MORRISON & CO.

2 FEN COURT, LONDON E.C.

DRUGS, OILS, AND CHEMICALS.

SPECIALITIES—Glycerine of all gravities, Sulphur, Brimstone, and Arsenic.
Leghorn Oils, Olive and Castor, Acetic Acid, Essence of Lemon and
Bergamotte. Chloral Hydrate and Croton Chloral Hydrate.

**PETROLEUM
JELLY,**

EQUAL TO AND CHEAPER THAN VASELINE.

SANITARY FLUID AND SHEEP DIP,
THE CHEAPEST AND BEST DISINFECTANT.

GREASE, PITCH, ASPHALTE, AND ALL PRODUCTS OF TAR AND ROSIN.
Samples and Prices on application.

GRINDLEY & CO., POPLAR, LONDON, E.

E. BRAMWELL & SON,

ST. HELENS, LANCASHIRE.

EPSOM SALTS (PURE).

CREAM CAUSTIC SODA.

SULPHITE OF SODA,

PHOTOGRAPHIC AND COMMERCIAL.

SHARLAND & COMPANY,

WHOLESALE DRUGGISTS,

AUCKLAND, NEW ZEALAND.

Samples may be sent for enclosure to Messrs. Horner & Sons, Mit-
Square, Aldgate, London E.

London References—Messrs. HORNER & SONS.

SHIRREFFS & CO.,

Chemists, Druggists, and General Merchants

ALLAHABAD, N. W. P., INDIA,

Possess exceptional facilities for the introduction of New Specialities
Patent Medicines, Druggists' Sundries, Perfumeries, &c.

AGENCIES UNDERTAKEN.



TRADE MARK.

BUTTER COLOURING & CHEESE RENNET

AGENTS AND CORRESPONDENTS:

ALFRED CHOLLET, Salmur.
W. & N. BLANDOFF & Co.,
Moscow.
CANEPA & RICHINI, Genoa.
LAFRENTZ & Co., London.
VICTOR FORCELUS, Abo.
HAGE, BLUM & Co., New York.
ALEX. BRANDEN, Hamburg.
GILLES HOEN, Battice.
A. MICHAELT, Christiania.
KUYPERS & Co., Rotterdam.
DOBBIN, OGILVIE & Co., Cor-
bourne.
WILL. ADAMSSON & Co., Me-
bourne.

MEYER & HENCKEL
Manufacturers, COPENHAGEN (Denmark).

**YARDLEY & CO.'S
CHOICE TOILET SOAPS**

Prize Medals Awarded for Purity and Excellence of Quality.

Manufactory—Ridgemount Street, Store Street, Tottenham Court
Road, LONDON.

Depot—32 Rue de l'Entrepot, PARIS.

ANTOINE'S INK

PARIS.

GREENWICH.

SOLD BY ALL STATIONERS THROUGHOUT THE WORLD.

GIOV. RESTUCCIA & CO.

Established 1800.] MESSINA (SICILY), [Established 1860.

MANUFACTURERS OF ESSENTIAL OIL

By Hand Press and Machine, viz.:

LEMON, BERGAMOT, ORANGE-SWEET and BITTER, guarant-
pure and of very superior quality, expressly made for Perfumery, Confection-
Liqueurs, and Mineral Waters.

Prize Medals at all the Chief Exhibitions of the world.

Sole Agent: JOHN MULLETT, 45 Fenchurch Street, F.C.

The Firm's name on goods is guarantee for their Absolute Purity, Highest Perfection,
Uniform Excellence. Prize Medals at Six International Exhibitions.

First and only Quality,
The Best.

ROSENTHAL'S

For Quality and Price
Unrivalled.

RICE STARCH: CRYSTALS, GRANULATED & FLOUR

For domestic and manufacturing uses, as Perfumers', Confectioners', Lozenge Manu-
facturers', Shirt & Collar Dressers', and driers', Bleachers', Paper Makers', and other
special uses. *Rosenthal's* "SANS RIVAL" Corn Flour, prepared from Rice, for food
purposes. F. ROSENTHAL & Co., Starch and Corn Flour Manufacturers,
12 Mark Lane, and Mincing Lane, London. Agents Wanted.

**BARBER'S CONCENTRATED
LIQUID COCHINEAL**

FOR COLOURING JELLIES, CUSTARDS, &c.

A few drops are sufficient to colour a large quantity of Jelly.

Put up for Retail Sale in 6d. and 1s. Bottles.

Manufactured only by the Proprietors—

G. BARBER & Co., 6 Worcester Drive, LIVERPOOL.
Club Moor,

Can be obtained through any of the usual Wholesale Firms, or from the
Proprietors, G. BARBER & CO., Club Moor, Liverpool.

INSECTICIDE GALZY

Infallible Destruction of Bugs, Fleas, Lice, Flies, Gnats,
Cockroaches, Mites, Ants, Caterpillars, Weevils, &c.

E. GALZY, MANUFACTURER

71 COURS D'HERBOUVILLE, LYON

Price List and Descriptive Album sent on receipt of post-paid applications.

COLOMBO, CEYLON.

NEIL S. CAMPBELL & CO.
CHEMISTS,

Possess exceptional facilities for the introduction of Novelties and General Merchandise. Agencies receive energetic attention.

NOTICE.

HORMUSJEE, RUTTONJEE & CO.,WHOLESALE AND EXPORT DRUGGISTS,
Manufacturing Chemists and General Merchants, Importers and
Exporters of Indian and Persian Products, &c.,

No. 6 Borah Musjid Lane Fort, Bombay, India,

Are prepared to accept Agencies for new Specialities, Patent Medicines, Druggists' Sundries, Spirits, Perfumery, &c.

Inventors wishing to have their specialities introduced into India should apply to the above firm. We will be glad to give our best attention to their sale, provided we are entrusted with the sole agency. Correspondence solicited.

PHILLIPS & COMPANY, Ltd.,
CHEMISTS,
WINE AND GENERAL MERCHANTS,
BOMBAY AND POONA, INDIA.**THE PERFECT SURGICAL BANDAGE.**

Preferred to all Makes hitherto used.

In Cases of Twelve Six-yard Rolls, 2 inches wide, 3s. 9d.; 2½ inches, 4s. 6d.; 3 inches, 5s. 6d.; or, Case containing twelve Six-yard Rolls of each width, 13s.

Free by post, to any address in the United Kingdom, for prepaid orders only.

MANUFACTURED BY THE

Bole Hall Mill Company, Tamworth, Staffordshire.

MANSON & SCHRAMM,

47 BELMONT ST., CHALK FARM ROAD, LONDON, N.W.,

MANUFACTURERS OF

ELASTIC GUM SURGICAL INSTRUMENTS,

Catheters, Bougies, Æsophagus Tubes, Horse Catheters, Ferguson's Glass Speculums, Rectum Bougies, &c.

WORKS:—54A CROSSLAND ROAD, CHALK FARM ROAD, LONDON, N.W.

BELGRAVIA TOOTH-PASTE

(REGISTERED).

IN LARGE JARS, 1s. and 2s. 6d. EACH.

PREPARED ONLY BY

JOHN BEDDARD,

46 Churton St., Belgrave Road, London, S.W.

HOUSEHOLD RELISH!
THE PRINCE OF SAUCES.

IN QUALITY HAS NO SUPERIOR—IN PRICE NO EQUAL.

Reputed half-pints, 36s. per gross; Reputed pints, 48s. per gross; Wine Quarts, 10s. 6d. per dozen. Carriage paid to any part of the United Kingdom. Packed for Exportation. Sample Bottles forwarded on receipt of Seven Stamps.

H. G. BOSTON & CO., Piccadilly, YORK.

"GOUROU" LOZENGES!

The new Stimulant and Thirst Quencher for Athletes, Cyclists, Rowing Men, M.P.'s, and all engaged in mental or physical work. In Boxes, 1/1½ and 2/9. Prepared only by

R. W. THOMAS & CO.,
10 FALM MALL, LONDON, S.W.

WRITE FOR PAMPHLET, SENT POST FREE.

Medical and Sanitary
Exhibition, 1881.**DIABETES** AWARD OF MERIT.**VAN ABBOTT'S GLUTEN BREAD,**

And all other suitable Foods for Diabetic Patients.

Dietary Tables and Price Lists post free on application.

VAN ABBOTT. 5 Princes Street. **CAVENDISH SQ., W.**Registered
Trade Mark

EDELWEISS

EDELWEISS,

THE NEW REGISTERED PERFUME

THE ROYAL PERFUMERY CO. (LIM.), 119 Aldersgate St., LONDON, E.C., have obtained from Mr. FERDINAND ROSING the sole right to make and sell "EDELWEISS" Perfumery and Toilet Requisites.

SPECIAL NOTICE.

ROSLING v. ATKINSON.—In the above action the Honourable Mr. Justice Chitty, on the 10th July, 1883, ordered and adjudged that the Defendants (Messrs. J. & E. Atkinson), their servants and agents, be perpetually restrained from infringing the Plaintiff's Registered Trade Mark.

Obtainable of all Merchants, Chemists, and Perfumers, in any part of the World.

PREPARED SILVERY WHITE GUTTA PERCHA ENAMEL
FOR STOPPING DECAYED TEETH.**P. A. STEVENS,**

(LATE OF HOXTON, N.)

72 MANSFIELD ROAD
HAVERSTOCK HILL, N.W.,SOLE PROPRIETOR AND MAKER OF THE
ABOVE.REGISTERED—NO. 3745.
P. A. S. can supply the above to Wholesale Houses in Sheet or Sicks, in any quantity, with their name stamped upon each piece. Price List & Samples sent Post Free.**S. SAINSBURY'S**

MANUFACTORY—

176 & 177
STRAND, LONDON.**Lavender**

In Bottles, from 1/ to 6/; in Cases, from 3/ to 15/6.

TRADE TERMS ON APPLICATION.

Water.**URINARY TEST PAPERS**
FOR ALBUMEN AND SUGAR.

QUALITATIVE AND QUANTITATIVE.

Chemists are requested to correspond with the Makers,

WILSON & SON, Chemists,
HARROGATE.**JOHN R. HALL'S**
WOOD VIOLET.

Patronised by their Royal Highnesses the Princess of Wales, Princess Christian, her Imperial and Royal Highness the Crown Princess of Germany, the Princess Louise, Princess Beatrice, the Princess William of Prussia, the Countess of Flanders, &c.

In bottles at 1/6, 2/6, 4/6, 5/6, 7/6, 8/6, 10/6, and 21/.

PROPRIETOR—E. R. BIGGLESTON, CANTERBURY.

CHLORIDE OF LIME IN PACKAGES.

Waterproof, Airtight, Neat, Clean, and convenient for use. Odourless, and retains its strength unimpaired, and will keep for years in any climate.

CHLORIDE OF LIME IN WATERPROOF AND AIRTIGHT PACKAGES.

24-lb BOXES, containing 24 1-lb. Packages...	...	Per Box 6/6
Ditto ditto 48 1-lb. ditto ...	...	7/
Ditto ditto 96 1-lb. ditto ...	...	8/
Ditto ditto 1-lb., 1/2-lb., and 1-lb. assorted	...	7/3

Terms and discounts on application.

NEW CARBOLIC SANITARY CO., Ltd., HACKNEY.**"SPÉCIALITÉ" LIME JUICE**

(NO MUSTY FLAVOUR).

For Sample and Terms:

FELTOE & SONS,
ALBEMARLE STREET, LONDON, W.

Can be obtained through the Wholesale Houses.

HORN & SON PATENT AGENTS.

Manufacturers' Designs and Trade Marks Registered.
SOMERSET CHAMBERS, 151 STRAND, LONDON.

Guide to New Patent Law and Registration gratis.

WALTER BARKER & SON.
172 STRAND
LONDON
W.C.

PICTORIAL-ADVERTISEMENTS.
Illustrations of every description made to Order. Engravings prepared from Photos or Sketches. ESTIMATES FREE.

IMPORTANT TO CIGAR DEALERS.

If you wish to save money, write to us for price before buying British or Foreign Cigars. **La Irreproachable**, 10/6 per box of 100, a marvel of size and quality. A sample will be sent post free on application enclosing business card.

SYMONDS & CO.,
CIGAR MAKERS AND IMPORTERS,
216 PENTONVILLE ROAD, LONDON, N.

A. F. & H. MOORE

(Late JOHN MOORE & CO.).

Cheapest House in the Trade for

SPONGE, TWINE, & CHAMOIS LEATHERS,

SPECIAL QUOTATIONS FOR SLATE SPONGES.

75 ST. ANNE STREET, LIVERPOOL.

SPONGE.

M. PETERSON & CO., Importers,

66 SOUTH JOHN STREET,

LIVERPOOL.

For Home, Foreign, and Colonial Markets.
Wholesale only.

BRAMWELL'S GASTRIC MIXTURE.

For Indigestion, Loss of Appetite, Weakness and Acidity of the Stomach, Flatulency or Wind, Spasms, Pain in the Sides, Sluggishness of the Liver, Biliousness, Sick Headache, Vomiting, Giddiness, Nervousness, and General Debility.

JAMES BRAMWELL,
26 & 28 NELSON STREET, LIVERPOOL.

IMPORTANT TO ALL CHEMISTS.

JAMES'S "SORE THROAT CURE."

RELAXED, INFLAMED, NERVOUS, and ULCERATED THROATS immediately relieved and speedily cured by the "SORE THROAT CURE."

This preparation is as efficacious as it is unique. It is far superior to Gargles, Cantharids, Astringent Lozenges, &c. Chemists who recommend the "SORE THROAT CURE" will find a ready sale for it when once introduced. In bottles, 1s. each. Sole Proprietor—

K. JAMES, CHEMIST, BEVERLEY, YORKSHIRE.

"RAISBECK'S STEEL POLISH"

Thoroughly removes RUST and TARNISH from all STEEL or METAL articles. Invaluable for ASHPANS, BRASSES, PEWTERS, NICKELS, &c. Free from all acids or poisonous ingredients. Keeps good in any climate.

Retail in ... 2d. 6d. 9d. 1s. Tins.

5oz. 8oz. 11oz. Nett weight.

Recommended, amongst others, by the Morley Local Board, Pudsey Fire Brigade, Leeds, Rochdale, and Bradford Co-operative Stores, &c. Wholesale and export only.

DAY & RAISBECK, BRADFORD, YORKS.

ESTAB. 1810.]

[ESTAB. 1810.

THOMAS HASSALL, BAY SALT MERCHANT, MANCHESTER.

Salt of every description packed to suit the Trade in Boxes, Jars, Bottles, Linen Bags, and Strong Prepared Paper Satchels.

Apply as above. Eleven Prize Medals Awarded.

WRIGHT'S

POULTRY EGG-PRODUCING POWDER.

REGISTERED TRADE MARK.

J. H. WRIGHT, RAWDON, LEEDS.

OLDHAM'S "PILL OF HEALTH."

ESTABLISHED OVER FIFTY YEARS.

For Indigestion, Bilious and Liver Complaints, Sick Headache, Giddiness, Wind, Spasms, Dropsy, Fits, Gravel, Pains in the Back and Loins, and all disorders of the Stomach and Bowels.

For Females they are invaluable, removing all obstructions, and impart a healthy bloom to the complexion.

In boxes, 7½d., 1/1½d., and 2/9d.

Prepared only by **W. KITCHING, BOLTON, LANCASHIRE.**

Critchley's Starch Gloss

Makes Starched Linen like new. Does not stick to spider-like Materials. Once tried always wanted. Used in the Royal Laundries. Sold everywhere, in Packets, 1d., 3d., 6d., and 1s. each. Write for quotations.

Prepared only by
T. CRITCHLEY,
BLACKBURN and
1 & 2 Australian Avenue,
LONDON, E.C.



ASSAY FURNACES, &c. THE MORGAN CRUCIBLE CO.,

Sole Manufacturers of

MORGAN'S and SALAMANDER CRUCIBLES,
BATTERSEA, LONDON, S.W.

All kinds of Crucibles in Flumbago, Clay, &c., Single and in Sets.

Muffles, Scorifiers, Porous Battery Cells, &c., &c.

Read "Assay Notes" in this Journal, April 15, 1883.

COWS

TAYLOR'S CLEANSING DRINKS

T. TAYLOR would call especial attention of the Trade to his "Cleansing Drinks," 5s. per dozen. They are put up in neat PACKETS, and save the Chemist immense trouble. N.B.—If preferred the Drinks can be had without the word "Taylor's"—only "Cleansing Drinks"—thereby enabling the Chemist to affix his own slip label; but to secure this, when ordering ask for those with the pink label. NO RETAIL PRICE AFFIXED.

Prepared by **THOMAS TAYLOR, M.R.C.V.S., DERBY**

And to be had from all the Wholesale Houses, or direct in gross boxes at £3 per gross, less 20 per cent. cash (carriage paid).

ESTABLISHED
40 YEARS.]

JOHN HYNAM'S PURIFIED FULLER'S EARTH FOR THE NURSERY AND TOILET.

Also in Powder and Kiln-dried Lumps for Manufacturing Purposes.

OFFICE WORKS—
11 Wilson Street, Finsbury, London. Redhill, Surrey.
THE TRADE SUPPLIED.

ANALYTICAL AND CONSULTING CHEMIST.

Mr. W. O. NICHOLSON, F.C.S.,

Member of the Society of Public Analysts, of the Pharmaceutical Society, &c.

THE METROPOLITAN LABORATORY,

32 Holborn Viaduct, London, E.C.,

Undertakes the Analysis of Waters, Foods, Drugs, Agricultural and Commercial Samples. Scale of Fees sent on application.

BARNES'
IMPERMEABLE CARRAGEEN POULTICE.

Emollient and antiseptic; pliable, portable, adhesive; when wetted adapts itself to the contours of the part to which it may be applied, and will retain moist heat for days. Invaluable for travellers and others. Also

CARBOLISED IMPERMEABLE CARRAGEEN POULTICE,
containing 10 per cent. Carbolic Acid.

Suggested for use in Diseases of the Skin.

Prepared by J. B. BARNES, Pharmaceutical Chemist, 1 Trevor Terrace,
Knightsbridge, London, S.W.

RUBBER STAMPS

OF EVERY DESCRIPTION. PATTERNS POST FREE.

Self-inkers, Daters, Monograms, Rubber-faced Type, Patent Inking Pads,
Rubber Printing Press, &c.

Apparatus and all supplies for Stamp Making. Wholesale and Export.

THE LONDON RUBBER PRINTING CO., MANUFACTURERS & PATENTEES,
33 CHEAPSIDE, LONDON.

**INDIARUBBER STAMPS**

(Warranted best quality).

Many Chemists are making large profits with our goods. Send business card for specimen sheets and trade terms to

E. M. RICHFORD,

THE CITY RUBBER STAMP COMPANY,
SNOW HILL, LONDON.

Nickel Silver Self-inking Press, with name complete,
PRICE 2/.

Usual Discount.

Branches—Liverpool, Manchester, Glasgow, Paris, Brussels.

MARKING INK.**CLARKE'S "WHITBY" JET**

Finds ready sale where introduced, is self-fixing, no heat or preparation required. In Boxes, 6d., 1s., 2s. 6d., and 5s.

Can be had through most Wholesale Houses.

JOHN T. CLARKE, Practical Indiarubber Stamp Manufacturer,
78 Faulkner Street, MANCHESTER.

W. GILBERT,

WHOLESALE HOMŒOPATHIC CHEMIST,

15 COMMERCIAL ROAD, BOURNEMOUTH,

Will supply Chemists (for cash with order only)

6d. Bottles Pilules, or Tinctures, 2s. 8d. per dozen.
1s. " " " " 5s. Od. "

Carriage paid to any part of the United Kingdom.

In ordering, please state if 1X or 3X Attenuations are preferred.

SNEATH'S CARPET RENEWER.

BEST AND CHEAPEST IN THE MARKET.

LEAVES A GOOD PROFIT TO THE RETAILER.

Put up in a very attractive packet, with full instructions for using.

AGENTS WANTED.

FOR PARTICULARS APPLY TO

T. D. SNEATH, Manufacturing Chemist, NEWARK, NOTTS.

FOULKES' CEMENT

AS USED IN ALL THE GOVERNMENT MUSEUMS.

SUITED FOR ANY SUBSTANCE, FROM GLASS & CHINA TO LEATHER, WOOD, OR IRON.
THE MOST USEFUL EVER INVENTED.

In Bottles at 6d. and 1s. (equal to three of the smaller), at Patent
Medicine and Druggists' Sundries Houses.

PURE PRECIPITATED CHALK.

Special Quotations to Wholesale Buyers.

Chemicals, Drugs, and Oils at lowest market rates.

APPLY TO

AUG. LEVERMORE & CO.,
8 LIME STREET, LONDON, E.C.

QUININE

And all other Alkaloids and Preparations of Quinine Barks, quality guaranteed of the highest standard. We forward free per Parcel Post Five Ounces Finest White Crystallised Sulphate of Quinine against remittance of 18s.; One Ounce Sample Vial, 4s. Special quotation for larger orders.

F. THOMAS & CO., 38 Mark Lane and 21 Mincing Lane,
LONDON, E.C.

GUSTAV MENTHOL

AGAINST NEURALGIA &
In Nickelled and Gilt

MENTHOL CONES

**BOEHM'S CHARMS,**

NERVOUS HEADACHE,
Metal Cases, 7/ per doz.

IN HARD WOOD BOXES,
3/6 and 6/ per doz.

Manufactories—38 CHARLES STREET, CITY ROAD, LONDON, E.C.;
and at OFFENBACH o/M, GERMANY.

ALFRED HOLT & CO.,

23 Irwell Chambers, W., Fazakerley St., LIVERPOOL.

PETROLEUM OIL,
COLEA & OLIVE OILS,
CYLINDER OILS,
COCOA NUT OIL,
COD LIVER OIL,

TURPENTINE,
BORAX,
GUMS, ROSIN,
GLYCERINE,
SEEDS, all kinds.

BEES' WAX, HONEY,
ESSENCE OF LEMON,
ASHES, POT & PEARL,
CAUSTIC SODA,
TALLOW,

DRUGS, CHYMICALS, AND ALL GENERAL PRODUCE.

Samples and Quotations on application.

SUTHERS' Chrono Thermal COMPOSITION ESSENCE.

THE ABOVE THERMAL REMEDY STANDS UNRIVALLED.

It is invaluable for Coughs, Colds, Quinsy, Bronchitis, Influenza, Headache, Sore Throat, Neuralgia, Wind on the Stomach, Giddiness, Cramp in the Stomach and Bowels, Diarrhoea, Dysentery, Spasms, Fits, Sciatica, Rheumatism, Cold Feet, Cold Sweats, Fever, Convulsions, Gripes in Children, Bad Circulation of the Blood, &c. Dose.—One or two teaspoonfuls, in a cupful of hot water, well sweetened, several times a day. To be kept in a cold place. In Bottles at 1s. 1jd. and 2s. 6d. each. To be had at all Chemists'.

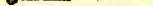
Prepared only at the Laboratory of WM. SUTHERS, Botanic Dispensary,
17 Sidney Street, Oxford Road, All Saints', MANCHESTER.

INDIARUBBER STAMPS.

Chemists should send for New revised Price Lists to

M. LINDNER, Manufacturer,

170 FLEET ST., LONDON, E.C.



Penholder and Pencil. Stamps from 2s. 6d., subject.

TO LET.

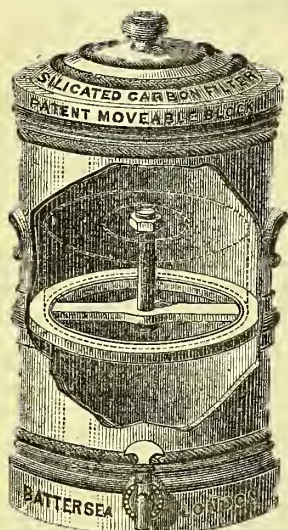
TO LET.

TO LET.

SILICATED CARBON

PATENT MOVEABLE-BLOCK FILTERS.

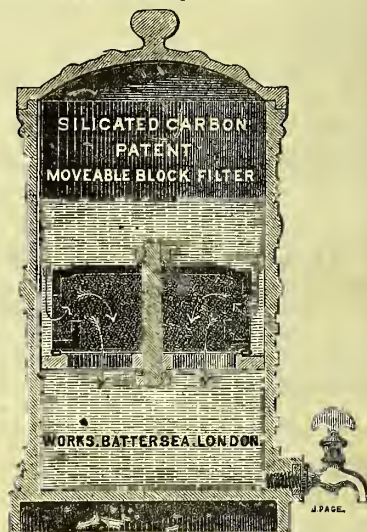
These Filters are constructed on Scientific principles, and can be renewed or repaired by the user without returning to the maker. They possess all the advantages of those with fixed filtering mediums, while the simple removal of the Silicated Carbon Block leaves the *whole* of the interior of the Filter open for inspection and cleansing. The working parts are stoneware, and corrosion is impossible.



(Elevation with Block removed.)

NO LOOSE PAN OR INNER VESSEL
TO CAUSE BREAKAGE.

The block being non-porous on the top and edges, an *upward* direction is given to the water, which thus passes through a greater thickness of the Silicated Carbon, as shown by the arrows in drawing.



(Section.)

The Silicated Carbon Block can be instantly removed, leaving the whole of the interior of the Filter *open* for inspection and cleansing.

To Cleanse the block, plunge it into boiling water, and well scrub it with a hard brush.

Extra blocks can be supplied with each Filter. All parts being interchangeable can be replaced in case of accidents.

This Patent can be adapted to all patterns manufactured by the SILICATED CARBON FILTER CO. *without increased charge.* In ordering please state "*with patent moveable block.*"

Domestic Filters (as above), in Cream-coloured Stoneware, with Plated Taps and Patent Moveable Blocks:—

No. 27.	O. $\frac{1}{2}$ gal. 10/6 each.	D. 6 gals. 42/- each.
	A. 1 " 14/6 "	E. 8 " 52/- "
	B. 2 " 21/- "	F. 12 " 70/- "
	C. 4 " 32/- "	

Dining Room Filters, in Marbled China, with Plated Taps and Patent Moveable Blocks:—

No. 22.	A. 2 gals. 35/- each.
	B. 5 " 80/- "

Refrigerative Terra Cotta do., do.:—

No. 25.	2 gals. 31/6 each.
---------	--------------------

All makes of Filters can be refitted on this principle, 1 gal. 8/6, 2 gals. 10/-, 4 gals. 12/- each. Larger sizes in proportion.

SILICATED CARBON FILTER COMPANY.

WORKS: BATTERSEA, LONDON.

SILICATED CARBON FILTERS.

SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

- | | |
|---|------|
| A.—Pocket Filter, 2½ inches diameter, in porcelain, with glass mouthpiece, in decorated metal-box | 2 6 |
| B.—Ditto, 3½ inches diameter, in best stoneware | 5 0 |
| C.—Emigrant's, 5 inches diameter, with silver-plated tap | 12 0 |
| G.—Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and Zululand, and to the Ashantee and Egyptian Expeditions | 3 6 |
| H.—Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits | 5 0 |

TABLE FILTER,

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



No. 24.

to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.

No. O, 2s. 6d.; A, 4s.; B, 5s. 6d.
Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

FOR FULL PARTICULARS WRITE TO THE

SILICATED CARBON FILTER COMPANY,

CHURCH ROAD, BATTERSEA, LONDON, S.W.

ARUNDEL & MARSHALL,

PENN STREET WORKS, HOXTON, LONDON, N.

(Telephone Exchange No. 220; also Telephone Office, No. 27 Falcon Square),

MANUFACTURERS OF PLAIN AND FANCY BOXES OF ALL DESCRIPTIONS.

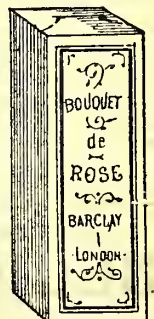
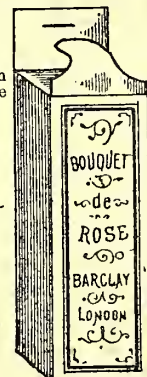
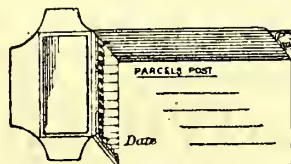
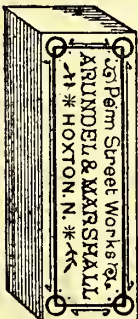
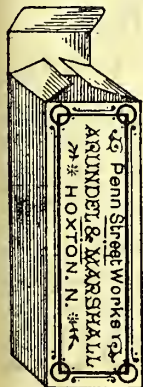
FOLDING CARDBOARD BOXES OF ALL SIZES AND VARIOUS FASTENINGS,

SPECIALLY SUITABLE FOR

PACKING BOTTLES, MEDICINES, SCENTS, LIQUEURS, WINES, SPIRITS, CONFECTIONERY, FANCY BISCUITS, TEA, FLOUR, TOBACCO, DRY SALTS, PROPRIETARY ARTICLES, &c.

Regular and various sizes of 2, 3, 4, 6, 8, 12, 16-oz., ½-lb., 1-lb., 1-lb., &c., in stock. As these cases are packed and stored FLAT, and so occupy little space, they are largely used by Shippers. ECONOMY OF SPACE IN STORING.

LINEN COVERED FOLDING BOXES,
EXTRA STRONG.



PARCELS POST BOXES.

Perfectly secure, Bottle being protected by inner wrapping of Patent Corrugated Card Board. Regular Sizes in stock; also with Divisions. Any Sizes or Shapes made.

SAMPLES AND ESTIMATES FURNISHED. SEE PRICE LISTS. TO BE HAD OF ALL DEALERS.

CRAWSHAW'S SPECIALITIES.

6d. DYES..(14 to the Doz.)..In $\frac{1}{2}$ gross Counter Cases..48/- Gross.	3d. PERFECT BLACK DYE..In $\frac{1}{4}$ Gross Wood Boxes 21/- Gross.
6d. DYES..(14 to the Doz.)..In 1 Dozen Boxes .....48/- Gross.	1s. SILVER PLATING SOLUTION..On $\frac{1}{2}$ Dozen Cards 9/- Doz.
3d. DYES..On $\frac{1}{4}$ Gross Cards .....21/- Gross.	6d. TINS CRAWSHAW'S INSECT POWDER..In 3 Dozen Wood Boxes 48/- Gross.
3d. DYES..In $\frac{1}{4}$ Gross Boxes .....21/- Gross.	3d. BOXES CRAWSHAW'S INSECT POWDER..In $\frac{1}{2}$ Gross Wood Boxes 21/- Gross.
3d. DYES..On $\frac{1}{2}$ Gross Cards .....14/- Gross.	1d. BOXES CRAWSHAW'S INSECT POWDER..In 1 Gross Wood Boxes 7/- Gross.
2d. DYES..In $\frac{1}{2}$ Gross Boxes .....14/- Gross.	1d. BOXES CRAWSHAW'S INSECT POWDER..Mounted on Cards of $\frac{1}{4}$ Gross.... 7/- Gross.
1d. DYES..In 3 Gross Counter Case, with glass lid .....7/- Gross.	3d. BOXES CRAWSHAW'S BEETLE POWDER..In $\frac{1}{2}$ Gross Wood Boxes 21/- Gross.
1d. DYES..On $\frac{1}{2}$ Gross Cards.....7/- Gross.	
1d. DYES..In $\frac{1}{4}$ Gross Boxes .....7/- Gross.	
6d. PERFECT BLACK DYE..In $\frac{1}{4}$ Gross Wood Boxes .....48/- Gross.	

E. CRAWSHAW & CO.,

80 FANN STREET, ALDERSGATE STREET, LONDON, E.C.

ARTISTIC SHOP FITTINGS
FOR HOME AND EXPORT.

Our NEW CATALOGUE sent free on receipt of Business Card.

JOHN CURTIS & SON, WADE STREET
and WADE LANE, **LEEDS.**

ESTABLISHED 1852.

F R I C T I O N .THE MOST PLEASANT MODE OF APPLYING IT TO THE SKIN IS BY THE
PANSTREPTON (or All-Pliant) FLESH BRUSH.

The best Article ever introduced for the purpose.

PRICES FROM 22/ to 36/ per doz.

Of all WHOLESALE HOUSES or of the SOLE MANUFACTURER,
R. CONDRON, 2 BINGFIELD STREET, LONDON, N.**J. ROSE, Commercial and General PRINTER,****NORTH CLIFF WORKS, KIRTON - IN - LINDSEY, R.S.O.,**
INVITES ATTENTION TO5,000 Memorandum Forms or Statements, 8x5 in., rom 17s. 6d.; ruling 6d. per 1,000 extra. 5,000 Bill Heads, same size or assorted equal 17s. 6d.; ruling 6d. per 1,000 extra. 5,000 Cream Laid Envelopes, Commercial Size, printed flap, 18s. 6d.; better qualities, 6d., 1s., and 1s. 6d. per 1,000 extra. 5,000 Direction Tallies, printed, size 4x1 $\frac{1}{2}$, 17s. 6d. 5,000 Gammed Direction Labels, printed, size 4 $\frac{1}{2}$ x3, 17s. 6d.
Seed, Powder, and Cash Envelopes and Druggists' Bags of every description, plain and printed, not to be surpassed by any house in the trade. Counter and Show Bills, Baking Powder, Epsom Salt, and Anti-Smut Wrappers. Paraffin, Benzoline, Oil, and General Labels, in choice styles and at lowest quotations. Prescription and Recipe Envelopes in all qualities and in every style of printing. Trade Catalogues, Prices Current, Business Circulars, and Ornamental Advertising Books. Specimens and Estimates free.

A liberal discount to large consumers. Carriage paid on parcels of 40s. and upwards.

Specially adapted for the Colonies and Hot Climates, being free from all HEATING and IRRITATING Properties.

SCOTT'S MIDLOTHIAN OAT FLOUR

Is unequalled as the most Wholesome and Nutritious Food FOR INFANTS AND INVALIDS.

SCOTT'S MIDLOTHIAN OAT FLOUR, made entirely from the finest quality of Midlothian Oats, is easily prepared, most satisfying, and INVALUABLE in promoting the GROWTH of BONE, and a healthy regularity of system when given to INFANTS, as it can be used through an ordinary Feeding Bottle by Infants of a few weeks old. Guaranteed perfectly pure, being free from husk and vegetable fibre.

*Highly recommended and used by Eminent Physicians at Home and Abroad.*Sole Makers—**A. & R. SCOTT, Offices—**(59 to 67 CROOKSTON ST.,
86 ST. JAMES' STREET,) **Kingston, Glasgow.**
LONDON DEPOT AND OFFICE—14 FINSBURY SQUARE, E.C.

PARIS, 1878—AWARD, THE ONLY GOLD MEDAL FOR PLUMBAGO CRUCIBLES.
THE SALAMANDER BRAND OBTAINED THE SOLE AWARD FOR CRUCIBLES AT FRANKFORT, 1881 (GOLD MEDAL).

THE MORGAN CRUCIBLE COMPANY

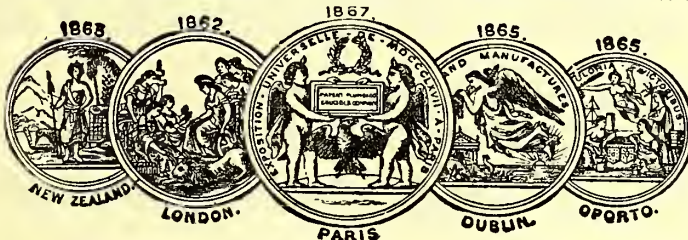
(THE PATENT PLUMBAGO CRUCIBLE COMPANY),
PHILADELPHIA CENTENNIAL EXHIBITION 1876—MEDAL AWARDED.

Moscow Exhibition,
1872.

Gold Medal. SOLE Award
for Crucibles.

Amsterdam Exhi-
bition, 1869.

Highest Award for Crucibles.



Havre Exhibition,
1868.

ONLY First-Class Medal
(Silver) awarded.

Paris Exhibition,
1867.

The only First-class Medals
Silver Medals,
Classes 40 and 51.

BATTERSEA WORKS, LONDON, ENGLAND
(SOLE MANUFACTURERS OF MORGAN'S AND SALAMANDER CRUCIBLES).

SALAMANDER - CRUCIBLES,

Patented in Great Britain, Germany, France, Italy, United States, &c., &c.,
ARE NOT AFFECTED BY MOISTURE OR FROST.

The only Plumbago Crucibles that require NO ANNEALING.

Each number contains about 2 lbs. English (thus, No. 25 = 50 lbs. capacity), and the Crucibles are so stamped.

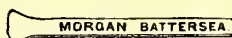


No.	5/0..per doz.	10 0 8	No. 5 ..per doz.	10 15 0	No. 25 .. each	10 6 3	No. 90 .. each	10 2 8
4/0..	"	0 1 1	6..	"	0 18 0	30..	"	0 7 6
3/0..	"	0 1 4	8..	"	1 4 0	35..	"	0 8 9
2/0..	"	0 2 0	10..	"	1 10 0	40..	"	0 10 0
0..	"	0 2 6	12..	"	1 16 0	45..	"	0 11 3
1..	"	0 3 0	14..	"	2 2 0	50..	"	0 12 6
2..	"	0 6 0	16..	"	2 8 0	60..	"	0 15 0
3..	"	0 9 0	18..	"	2 14 0	70..	"	0 17 6
4..	"	0 12 0	20..	"	3 0 0	80..	"	1 0 0

SALAMANDER MUFFLES, to suit above Crucibles, 2d. per Number.



SALAMANDER COVERS.



12-in. STIRRERS, 12s. per dozen.



STANDS.



TRADE MARK.

INDENT FOR

SALAMANDER-CRUCIBLES

And thereby ensure getting DAMP-PROOF CRUCIBLES
manufactured by

THE MORGAN CRUCIBLE COMPANY.

FLUXING POTS.

IDENTICAL WITH THE FRENCH IN QUALITY, FORM, AND CAPACITY.

No.	Height, inches.	Height, milli.	Diameter, inches.	Diameter, milli.	Per dozen Crucibles.
0	3	050	1 1/2	030	20 0 4
1	3	055	1 1/2	033	20 0 6
2	3	060	1 1/2	036	20 0 8
3	3	075	1 1/2	048	20 0 10
4	3	080	1 1/2	048	20 0 10
5	3	090	1 1/2	050	20 0 12
6	3	100	1 1/2	055	20 0 14
7	3	110	1 1/2	063	20 0 16
8	3	120	1 1/2	068	20 0 18
9	3	135	1 1/2	074	20 0 24
10	3	150	1 1/2	080	20 0 29
12	3	185	1 1/2	095	20 0 49

COVERS TO FIT ALL SIZES.

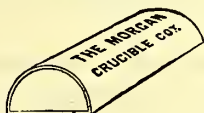


All sizes upwards can be supplied, but BATTERSEA
ROUND are found in use to be superior.

SCORIFIERS.



MUFFLES.



ROASTING DISHES.



ALL DAMP-PROOF CRUCIBLES manufactured by

THE MORGAN CRUCIBLE COMPANY

Are distinguished by the Brand

“SALAMANDER.”

BATTERSEA ROUND.

Stamped as on illustration.



No.	Height, inches.	Width, inches.	Crucibles per doz.	Covers, per doz.	No.	Height, inches.	Width, inches.	Crucibles per doz.	Covers, per doz.
A	3 1/2	1 1/2	0/5	0/6	B	3 1/2	1 1/2	0/6	0/6
C	3 1/2	1 1/2	0/6	0/6	D	3 1/2	1 1/2	0/10	0/6
E	3 1/2	1 1/2	0/6	0/6	F	3 1/2	1 1/2	1/5	1/0
G	3 1/2	1 1/2	1/0	1/0	H	3 1/2	1 1/2	2/1	1/3
J	3 1/2	1 1/2	3/0	3/0	K	3 1/2	1 1/2	3/3	2/0
L	3 1/2	1 1/2	5/6	5/6	M	3 1/2	1 1/2	8/6	3/6
N	3 1/2	1 1/2	9/0	9/0	O	3 1/2	1 1/2	13/6	3/6
P	3 1/2	1 1/2	15/0	3/6	Q	3 1/2	1 1/2	17/0	4/0
R	3 1/2	1 1/2	23/0	5/0					

BATTERSEA TRIANGLE.

Stamped as on illustration.

No.	Height, inches.	Width, inches.	Crucibles per doz.	Covers, per doz.	No.	Height, inches.	Width, inches.	Crucibles per doz.	Covers, per doz.
S	4 1/2	4 1/2	2/0	1/0	T	4 1/2	4 1/2	1/6	1/0
U	3 1/2	3 1/2	1/1	0/9	V	3 1/2	3 1/2	0/10	0/9
W	3 1/2	3 1/2	0/8	0/6	X	3 1/2	3 1/2	0/6	0/6
Y	3 1/2	3 1/2	0/5	0/6	Z	3 1/2	3 1/2	0/4	0/6



NOTICE.—Care should be taken in all instances, when ordering, to specify the Crucibles, &c., manufactured by

THE MORGAN CRUCIBLE CO. (Sole Manufacturers of Morgan's), Battersea Works, LONDON, S.W.
and Salamander Crucibles

THE ONLY PERFECT ENEMA OBTAINABLE.

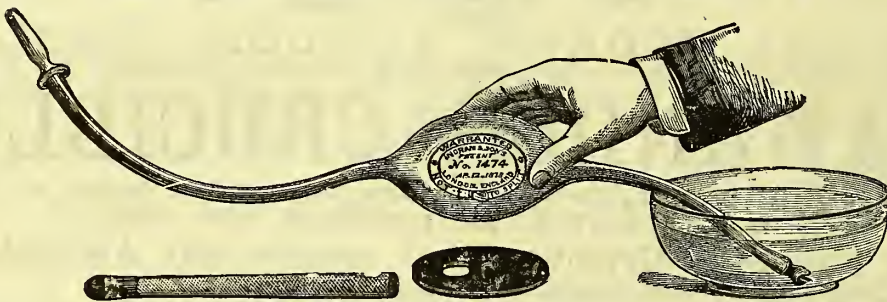
INGRAM'S IMPROVED HIGGINSON ENEMA AND SYRINGE APPARATUS

(BY ROYAL LETTERS PATENT).

Made without Seams or Ribs by our Patent Process of dipping in a solution of India Rubber, thus adding great strength and durability.

NONE GENUINE UNLESS STAMPED WITH NO. OF PATENT 1474.

CAUTION.—The only
Enema made without
Ribs.



All Imitations may be
detected by the Ribs on the
Surface, and are always
liable to split.

WARRANTED NOT TO SPLIT.

A.—Metal Pin Valve.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is perfectly smooth on the surface, will not become hard or sticky, will not leak, and will not admit air while injecting or refilling. Specially prepared to resist the heat of tropical countries.

The great superiority of INGRAM'S IMPROVED PATENT SEAMLESS ENEMA over all others has given rise to VARIOUS IMITATIONS, and it has become imperative that the Patentees should, in order to PREVENT DECEPTION, explain the PROCESS OF MANUFACTURE OF THEIR ENEMA and the MODE OF MANUFACTURE OF IMITATIONS thereof, as they have UNDENIABLE PROOF that INFERIOR ENEMAS are positively BEING SOLD as their "ADVERTISED" PATENT SEAMLESS ENEMA.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is made by a NEW PATENT PROCESS, viz. : By repeated dipping in a solution of India Rubber until the required substance is attained. This process adds greatly to its STRENGTH and DURABILITY, and, at the same time, dispenses WITH ALL SEAMS, which, as is well known, are weak points in an Enema. This improved mode of manufacture (the result of long study and experience) enables the Patentees to produce a PERFECT ENEMA WITHOUT SEAMS, thus overcoming the great fault to be found in ALL other Enemas, viz. : SPLITTING AND LEAKING, which has always been a source of trouble.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA is fitted with IMPROVED VALVES, which prevent the admission of air with the fluid and CAN at any time BE REPAIRED, if necessary.

CAUTION.—Imitations of INGRAM'S IMPROVED PATENT SEAMLESS ENEMA are made of several pieces of Sheet India Rubber, which are cemented together and shaped in a mould, THUS PRODUCING RIBS ON THE SURFACE, and ENEMAS SO MANUFACTURED ARE ALWAYS LIABLE TO SPLIT AND LEAK AT THE SEAMS, AND THUS TO BECOME QUITE USELESS.

INGRAM'S IMPROVED PATENT SEAMLESS ENEMA may be distinguished from ALL IMITATIONS by its ENTIRE FREEDOM FROM RIBS OF ANY DESCRIPTION on its surface, and by having an IMPROVED METAL PIN VALVE at the suction end A; and it is acknowledged to be the ONLY PERFECT ENEMA OBTAINABLE.

Patented in England, No. 1474, April 12, 1878; in France, No. 126,909, October 11, 1878; and in America, No. 212,939, March 4, 1879.

To be obtained of all Surgical Instrument Makers, Druggists' Sundriesmen, Chemists and Druggists, in the three following qualities:—

- No. 1a. Highly Polished, in Red, Green, Blue, Black, or White.
- No. 1b. Unpolished, in Red, Green, Blue, Black, or White.
- No. 2. Unpolished, in Drab only.

Favourably noticed in "British Medical Journal," December 13, 1879; in the "Lancet," January 8, 1880; and in "British Medical Journal," September 30, 1882,

20 HIGHEST AWARDS.—INTERNATIONAL VICTORIES, 1883.

Gold Medal, Pharmaceutical Exhibition, Vienna, Austria. Silver Medal, World's Exposition, Amsterdam, Holland.

HIGHEST AWARDS OVER ALL COMPETITORS.**SPECIALTY:****PHARMACOPŒIA & SURGICAL PLASTERS.**

ANTISEPTICS, ANTISEPTIC DRESSINGS AND ABSORBENTS.

SEABURY & JOHNSON**PLASTERS.**

Adhesive, Breast, Corn, Bunion, Court, Homœopathic, Isinglass, Kid, Mead's, Medicinal, Mustard, Spice, Pharmaceutical and Surgical, of every description, in the most approved form.

COTTONS.

Absorbent, Iodoform, Borated, Salicylated, Carbulated and Styptic and Absorbent Cottons, impregnated with Benzoic Acid, Corrosive Sub., Naphthaline, Chloride Zinc, &c., of any desired strength.

GAUZE.

Lister's Carbulated, Corrosive Sub., Eucalyptol, Iodoform, Naphthaline, Thymol, Plain Bleached, and Absorbent. We will supply Gauze impregnated with Benzoic Acid, Naphthaline, Salicylic Acid, Chloride of Zinc, &c., of any desired strength.

LINT.

Absorbent, Borated, Carbulated, Salicylated, Sublimated, &c., &c. We will supply Absorbent Lints with any Antiseptic of any desired strength. Also Flax Lints.

Crude Antiseptics, Drainage Tubes, Bone and Rubber, Iodoform Sprinklers, &c., &c.

MANUFACTURERS OF

**Plasters,
Cottons,
Gauzes,
Lints,
Cotton Wool,
Jute,
Oakum,
Bandages,
Oiled Silk,
Oiled Muslin,
Oiled Paper,
Gutta Percha Tissue,
Mackintosh Cloth,
Catgut Ligatures,
Silk Ligatures,
Spongio Piline,
Bandage Gum,
Rubber Sheeting.**

SEND FOR CATALOGUE.

PLASTERS.

Size, $5 \times 7\frac{1}{2}$ inches. Surgeons' Adhesive, in 1 and 5 yard rolls, 5 to 7 inches in width. Breast, 6 and 7 inches in diameter, &c. Surgeons' Adhesive, Mead's, and Isinglass on spools, $\frac{1}{2}$, 1, 2, and 3 inches wide, 10 yards long. Special formulæ made to order.

OUR COTTONS ARE

Perfectly neutral. Have no acid reaction. Very absorbent. In continuous layers in boxes and packages containing 1, 2, 4, 8, and 16 ounces. Strength and quality guaranteed.

GAUZES

in 5 yard rolls in Decorated Tin cases. 100 and 1,000 yards wrapped in waterproof paper. Also in bandages, $2\frac{1}{2} \times 10$, or 4 in. $\times 10$ yards in length. Strength and quality guaranteed.

ADVANTAGES OVER OTHER LINT.

25 per cent. cheaper than any in the market. 20 per cent. more surface to the pound roll. Greater absorbency, and manufactured of pure materials. Tears in both directions—most Lint tears only one way. To be had in lbs., ounces, and small packages for retailing. We are the original producers in this country.

Improvements will be added in the interests of progressive Antiseptic methods whenever professionally endorsed.

SEABURY & JOHNSON, 1 & 2 Australian Avenue, LONDON, E.C.

H. C. MASON & CO. GENERAL AGENTS.

KEENE & ASHWELL'S

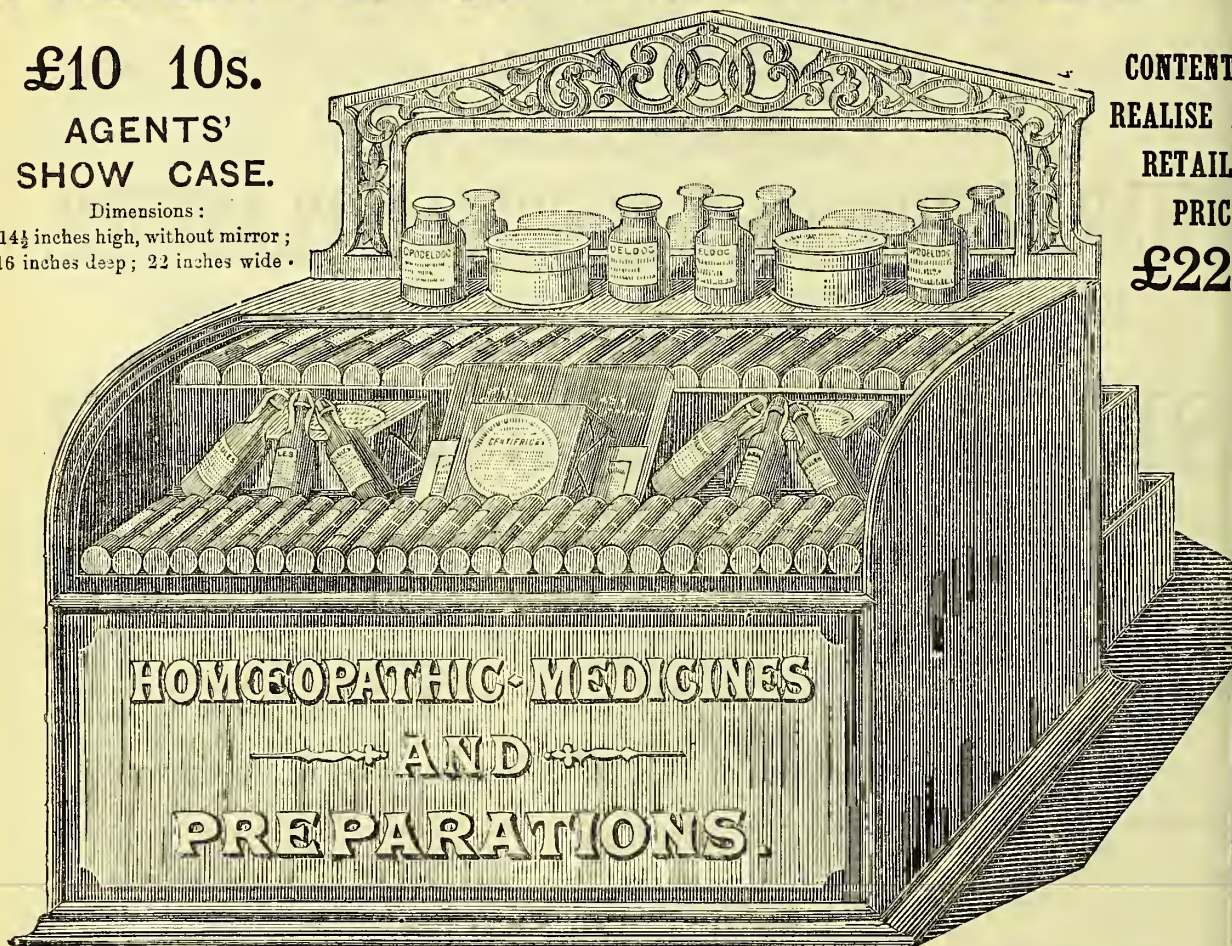
£10 10s.

AGENTS'
SHOW CASE.

Dimensions :

14½ inches high, without mirror ;
16 inches deep ; 22 inches wide .

CONTENTS
REALISE A
RETAIL
PRICE
£22.

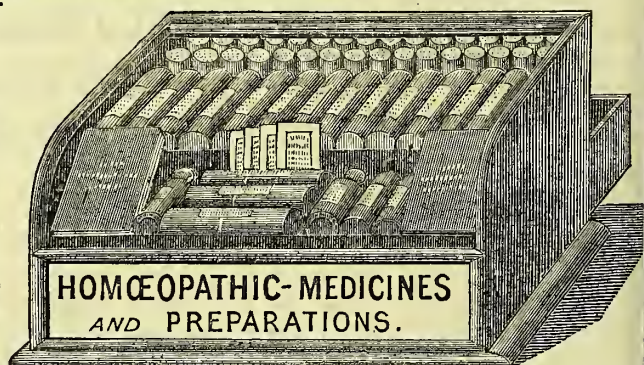


50/- AGENT'S SHOW CASE.

CONTENTS REALISE AT
RETAIL PRICES **105/-**

Size of 50s. Case, 16 × 10½ × 8.

This is the cheapest and best Homœopathic Show Case in the trade, and the only one with bent glass for the money. A list of others on application.



Homœopathic Medicines supplied in Bulk, and with Keene & Ashwell's "Companion to the Homœopathic Pharmacopœias," Chemists may be their own manufacturers. The "Companion," post free, 3/6, and Price Lists on application.

CAMPBOR PILULES, in Bulk, per lb. 2/6
CAMPBOR PILULES, put up in 1-oz. Green Capsuled Bottles, retail 1/-, per doz. 3/6
RUBINI'S CAMPBOR, for Cholera and Choleraic Diarrhœa, ,, 1/-, per doz. 4/6
ACID GLYCERINE of PEPSINE.—This is the best form of Pepsine, and finds a ready sale for Indigestion.
 Our preparation contains 5 grains in each teaspoon.
 Price per Bulk, 4/6 per lb. In Bottles to retail 1/6, 2/6, 4/6, and 8/6, per doz. 12/, 20/, 36/, 6/

DEPOT AND LABORATORY, **74 NEW BOND STREET.**
LONDON.